THE

PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

On the 22nd of June last, the Fund completed twenty-five years of existence. During this period a large amount of important work has been done. Western Palestine, as far north as the Nahr el Kâsimîyeh, has been completely surveyed, and fifteen hundred square miles of the country east of the Jordan. Important excavations have been made in and around Jerusalem, and at Tell Hesy. Besides a series of accurate maps of the Holy Land, an immense number of drawings, photographs, and plans has been produced and published, together with memoirs of the surveys, name lists, and other valuable matter, whilst the *Quarterly Statements* have afforded the means of publishing many new discoveries by the officers of the Fund and other travellers, and the views and arguments of scholars and explorers with reference to disputed sites and other points of interest. It is satisfactory that the fund has lost none of its vitality. No less than 187 new members were added during the past year, and the vigour with which the work is carried on where openings for it present themselves, is shown by the recent important excavations of Mr. Flinders Petrie, in the western plain; the researches of Herr Schick at Jerusalem; and of Herr Shumacher in the north and north-east.

In the present number will be found two important communications from Mr. Flinders Petrie, one being notes on places visited by him in Jerusalem, and the other a short and condensed report of his excavations at Tell Hesy.

The latter have already proved of the greatest interest and importance. A wall, 28 feet 8 inches thick, of clay bricks, unburnt, which has been uncovered, is believed to be that of the ancient Amorite city of Lachish, erected probably 1,500 years before Christ. Phœnician pottery of about 1100 B.C. was found above its level. Later constructions found on the spot are the supposed wall of Rehoboam, and remains of the fortifications made in the reigns of Asa, Jehosha-

phat, Uzziah, Jotham, and Manasseh. In one building, probably of 900 B.C. or 1000 B.C., was found a curious form of decoration—a shallow pilaster, with very sloping side, resting on a low cushion base, and with a volute at the top. "We are here," Mr. Petrie writes, "face to face at last with work of the earlier Jewish kings, probably executed by the same school of masons who built and adorned the Temple of Solomon."

The discoveries of pottery are most valuable. Some fragments have inscriptions of very ancient form. "We now know for certain the characteristics of Amorite pottery, of earlier Jewish, and of later Jewish, influenced by Greek trade. In future all the tells and ruins of the country will at once reveal their age by the potsherds which cover them."

The work of Mr. Guy le Strange on "Palestine under the Moslems" was published in April.

For a long time it had been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin, French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematise, compare, and annotate them.

This has now been done for the Society by Mr. Guy le Strange. The work is divided into chapters on Syria, Palestine, Jerusalem, and Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. The volume contains maps and illustrations required for the elucidation of the text.

The Committee have great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves. The price to subscribers to the Fund is 8*s.* 6*d.*; to the public 12*s.* 6*d.*

The new map of Palestine, so long in hand, is now ready. It embraces both sides of the Jordan, and extends from Baalbek in the north to Kadesh Barnea in the south. All the modern names are in black; over these are printed in red the Old Testament and Apocrypha names. The New Testament, Josephus, and Talmudic names are in blue, and the tribal possessions are tinted in colours, giving clearly all the identifications up to date. It is the most comprehensive map that has been published, and will be invaluable to universities, colleges, schools, &c.

It is published in 21 sheets, with paper cover; price to subscribers to the Fund, 24*s.*, to the public, £2. It can be had mounted on cloth, rollers, and varnished for hanging. The size is 8 feet by 6 feet. The cost of mounting will be extra.

Mr. Henry A. Harper's work, on "The Bible and Modern Discoveries" was published last December. It is an endeavour to present in a simple but yet connected form the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers. The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought they illustrated the text. To the Clergy and Sunday School Teachers, as well as to all those who love the Bible, the writer hopes this work will prove useful. He is personally acquainted with the land, and nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. The work is in one large, handsome volume of 600 pages. It is illustrated with many plates, and a map showing the route of the Israelites and the sites of the principal places mentioned in the sacred narratives. The work has had a very gratifying reception. The Third Revised Edition is now nearly exhausted. It should be noted that the book is admirably adapted for the school or village library.

An interesting note from Rev. J. E. Hanauer is inserted in this *Statement*, which will set at rest the many conflicting statements as to whether or not the Dead Sea is visible from Jerusalem.

Mr. Hanauer has forwarded a series of photographs of the rock-hewn altar near Sŭrâh, of sculptured stones found at 'Artûf, of the interesting sculptured figures in the cave near Saris (taken by magnesium light), and of stones with inscriptions recently dug up near the supposed St. Stephen's Church, north of Damascus Gate.

From Mr. G. R. Lees, F.R.G.S., Head Master of the Boys' School of the London Jews' Society at Jerusalem, has been received an account of further observations on rock-hewn chambers at Silwân, which appear to have been chapels. Herr Schick has also sent elaborate drawings and reports of the same, as well as an account of discoveries of mosaics, &c., at the so-called House of Caiaphas, of a newly opened tomb near Bethany, &c.

Mr. Lethaby, of Kerak, has sent two fragments of soft limestone with sculptured figures of animals, which were found in digging the foundations of a house.

The projected railway between Jaffa and Jerusalem was begun in March. The Governor of Jerusalem and other notabilities went down to Jaffa to see the work commenced. It is believed that the line will run past Ramleh and up the Wady Surar. It is reported that a concession has also been given for a line between Haifa and Damascus.

The first volume of the "Survey of Eastern Palestine," by Major Conder, has been issued to subscribers. It is accompanied by a map of the portion of country surveyed, special plans, and upwards of 350 drawings of ruins, tombs, dolmens, stone circles, inscriptions, &c. The edition is limited to 500. The first 250 subscribers pay seven guineas for the three volumes; subscribers to the "Survey of Western Palestine" are privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee *are pledged never to let any copies be subscribed under the sum of seven guineas.* Mr. A. P. Watt, 2, Paternoster Square, is the Sole Agent. The attention of intending subscribers is directed to the announcement on the inside of the cover of this number.

Considerable progress has also been made with the second volume, which consists of M. Lecomte's beautiful drawings, illustrating the Mission of M. Clermont-Ganneau in 1874. The illustrations for the third volume, Mr. Chichester Hart's "Fauna and Flora" of the Wâdy Arabah, are nearly ready.

The Committee have added to their list of publications the new edition of the "History of Jerusalem," by Walter Besant and E. H. Palmer (Bentley & Son). It can be obtained by subscribers, carriage paid, for 5*s.* 6*d.*, by application to the Head Office only. The "History of Jerusalem," which was originally published in 1871, and has long been completely out of print, covers a period and is compiled from materials not included in any other work, though some of the contents have been plundered by later works on the same subject. It begins with the siege by Titus and continues to the fourteenth century, including the Early Christian period, the Moslem invasion, the Mediæval pilgrims, the Mohammedan pilgrims, the Crusades, the Latin Kingdom, the victorious career of Saladin, the Crusade of Children, and many other little-known episodes in the history of the city and the country.

The books now contained in the Society's publications comprise an amount of information on Palestine, and on the researches conducted in the country, which can be found in no other publications. It must never be forgotten that no single traveller, however well equipped by previous knowledge, can compete with a scientific body of explorers, instructed in the periods required, and provided with all the instruments necessary for carrying out their work. The books are the following (*the whole set can be obtained by application to*

Mr. George Armstrong, for £2, carriage paid to any part in the United Kingdom only) :—

By Major Conder, R.E.—

(1) "Tent Work in Palestine."—A popular account of the Survey of Western Palestine, freely illustrated by drawings made by the author himself. This is not a dry record of the sepulchres, or a descriptive catalogue of ruins, springs, and valleys, but a continuous narrative full of observations upon the manners and customs of the people, the Biblical associations of the sites, the Holy City and its memories, and is based upon a six years' experience in the country itself. No other modern traveller has enjoyed the same advantages as Major Conder, or has used his opportunities to better purpose.

(2) "Heth and Moab."—Under this title Major Conder provides a narrative, as bright and as full of interest as "Tent Work," of the expedition for the *Survey of Eastern Palestine*. How the party began by a flying visit to North Syria, in order to discover the Holy City—Kadesh—of the children of Heth; how they fared across the Jordan, and what discoveries they made there, will be found in this volume.

(3) Major Conder's "Syrian Stone Lore."—This volume, the least known of Major Conder's works, is, perhaps, the most valuable. It attempts a task never before approached—the reconstruction of Palestine from its monuments. It shows what we should know of Syria if there were no Bible, and it illustrates the Bible from the monuments.

(4) Major Conder's "Altaic Inscriptions."—This book is an attempt to read the Hittite Inscriptions. The author has seen no reason to change his views since the publication of the work.

(5) Professor Hull's "Mount Seir."—This is a popular account of the Geological Expedition conducted by Professor Hull for the Committee of the Palestine Fund. The part which deals with the Valley of Arabah will be found entirely new and interesting.

(6) Herr Schumacher's "Across the Jordan."

(7) Herr Schumacher's "Jaulân."—These two books must be taken in continuation of Major Conder's works issued as instalments of the unpublished "Survey of Eastern Palestine." They are full of drawings, sketches, and plans, and contain many valuable remarks upon manners and customs.

(8) "The Memoirs of Twenty-one Years' Work."—This work is a popular account of the researches conducted by the Society during the past twenty-one years of its existence. It will be found not only valuable in itself as an interesting work, but also as a book of reference, and especially useful in order to show what has been doing, and is still doing, by this Society.

(9) Herr Schumacher's "Kh. Fahil." The ancient Pella, the first retreat of the Christians; with map and illustrations.

(10) Names and Places in the Old and New Testament and Apocrypha, with their modern identifications, with reference to Josephus, the Memoirs, and *Quarterly Statements.*

(11) Besant and Palmer's "History of Jerusalem," already described.

(12) Northern 'Ajlûn "Within the Decapolis," by Herr Schumacher.

To the above must now be added Mr. Henry A. Harper's "The Bible and Modern Discoveries." Price to the public, 16*s.*; to subscribers to the Palestine Exploration Fund, 10*s.* 6*d.*, carriage included. And Mr. Guy le Strange's important work "Palestine under the Moslems," price to the public, 12*s.* 6*d.*; to subscribers to the Fund, 8*s.* 6*d.*

Branch Associations of the Bible Society, all Sunday School unions within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The income of the Society, from March 20th to June 20th inclusive, was —from annual subscriptions and donations, £132 18*s.* 6*d.*; from donations for excavations, £174 18*s.* 0*d.*; from all sources, £609 9*s* 7*d.* The expenditure during the same period was £1,025 1*s.* 1*d.* On June 20th, the balance in the Bank was £772 17*s.* 0*d.*

Subscribers are begged to note that the following can be had by application to the office, at 1*s.* each:—

1. Index to the *Quarterly Statement*, 1869–1880;
2. Cases for Herr Schumacher's "Jaulân;"
3. Cases for the *Quarterly Statement*, in green or chocolate.
4. Cases for "Abila," "Pella," and "'Ajlûn" in one volume.

The following gentlemen have kindly undertaken to act as Hon. Local Secretaries :—

The Rev. Vincent Joseph Higgins, Ashworth Vicarage, for Nottingham.
John Nanson, Esq., for Ambleside.
Rev. T. F. Wright, for Cambridge, Mass., U.S.A.
W. Clarkson Wallis, Esq., for Brighton.
Rev. R. Raikes Bromage, M.A., F.R.G.S., Keyford Parsonage, for Frome, in place of C. W. Le Gros, Esq., resigned.
Norman Penney, Esq., for Gloucester.

A. Kemp Brown, Esq., M.A., owing to his leaving Leeds, has resigned his appointment as Honorary Secretary.

The Committee will be glad to communicate with ladies and gentlemen willing to help the Fund as Honorary Secretaries.

Early numbers of the *Quarterly Statement* are very rare. In order to make up complete sets, the Committee will be very glad to receive any of the following numbers :—

No. II, 1869; No. VII, 1870; No. III, 1871; January and April 1872; January, 1883, and January, 1886.

It having again been reported to the Committee that certain book hawkers are representing themselves as agents of the Society, the Committee have to caution subscribers and the public that they have no book hawkers in their employ, and that none of their works are sold by itinerant agents.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

The only authorised lecturers for the Society are—

(1) Mr. George St. Clair, F.G.S., Member of the Anthropological Institute and of the Society of Biblical Archæology.

His subjects are :—

(1) *The Buried City of Jerusalem, and General Exploration of Palestine.*
(2) *Discoveries in Assyria, Chaldea, and Palestine.*
(3) *The Moabite Stone and the Pedigree of the English Alphabet.*
(4) *Jerusalem of David, Nehemiah, and Christ.*
(5) *Sight-seeing in Palestine: a Narrative of Personal Experiences.*
(6) *Israel's Wars and Worship, illustrated by the new Survey.*
(7) *The Gospel History in the light of Palestine Exploration.*

Address: Geo. St. Clair, Bristol Road, Birmingham, or at the Office of the Fund.

(2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects, and all illustrated by original photographs shown as "dissolving views:"—

The Survey of Western Palestine, as illustrating Bible History.

Palestine East of the Jordan.

The Jerusalem Excavations.

A Restoration of Ancient Jerusalem.

(3) The Rev. Thomas Harrison, F.R.G.S., Member of the Society of Biblical Archæology, 38, Melrose Gardens, West Kensington Park, W. His subjects are as follows:—

(1) *Research and Discovery in the Holy Land.*
(2) *In the Track of the Israelites from Egypt to Canaan.*
(3) *Bible Scenes in the Light of Modern Science.*

ANNUAL MEETING.

The Annual Meeting of the General Committee of this Society took place at the Office, 1, Adam Street, on July 1st. Among those present were Viscount Sidmouth, James Glaisher, Esq., F.R.S., Walter Morrison, Esq., M.P., Walter Besant, Esq., M.A., T. Chaplin, Esq., M.D., Captain Mantell, R.E., W. Aldis Wright, Esq., Wm. Simpson, Esq., Rev. William Allan, Basil Woodd Smith, Esq., Rev. W. J. Stracey, Guy le Strange, Esq., Henry Mandslay, Esq., &c.

James Glaisher, Esq., F.R.S., in the Chair.

The Chairman, after mentioning that he held in his hand a packet of letters from various members regretting their inability to attend, and that the Report of the last Meeting would be taken as read, called upon the Hon. Secretary to read the Report of the Executive Committee for the past year.

My Lord and Gentlemen,

Your Executive Committee, elected at the last General Meeting, on July 16th, 1889, have now, on resigning their office, to render an account of their administration during their term of office for the past year 1889–90.

It may be noted at the outset that the Society has now completed its twenty-fifth year of existence.

Your Committee have held twenty meetings since the last Report was issued.

In the last Report your Committee reported that they had hopes of a Firman being granted. Their hopes were realised in the month of February. On the 27th an official letter arrived stating that a permit for excavating in the vicinity of 'Ajlân (Eglon) had been granted. Having secured the services of Mr. Flinders Petrie previously, immediate steps were taken to inform all subscribers and friends interested in the work, and a "special appeal" was made inviting subscriptions. The result up to date, your Committee are pleased to report, is the receipt of £1,110 6*s.* 6*d.*, although the amount named by the Committee was only £1,000. Mr. Petrie, on closing his work in Egypt, lost no time in proceeding to Palestine, but owing to a clerical error in the Firman, a delay of three weeks was caused. The following is a summary of the excavations by Mr. Flinders Petrie himself. It will be found a very satisfactory record of work done and discoveries made :—

"After lengthy delays, officially, I was able to begin excavation for the Palestine Exploration Fund in the middle of April. Unfortunately, nothing was known of the history of pottery in Syria, and therefore nothing had been done in past surveys and explorations towards dating the various *tells* and *khurbehs*. It had been necessary, therefore, in applying for a site, to trust to the identification by names ; and there seemed little risk in expecting that Umm Lakis and 'Ajlân would, one or other—if not both—prove to be Amorite towns, Lachish and Eglon. Some other ruins were included in the legal limit of are for the permission. Among them, most happily, was Tell Hesy.

"So soon as I arrived and could examine our ground, I saw, from my Egyptian experience, that every site, except Tell Hesy, was of Roman age, and unimportant. At Umm Lâkis, three days' work amply proved its late date; and 'Ajlân was a still more trivial site. I therefore attacked Tell Hesy, a mound of house ruins 60 feet high and about 200 feet square. All of one side had been washed away by the stream, thus affording a clear section from top to base. The generally early age of it was evident, from nothing later than good Greek pottery being found on the top of it, and from Phœnician ware (which is known in Egypt to date from 1100 B.C.), occurring at half to three-quarters of the height up the mound. It could not be doubted, therefore, that we had an Amorite and Jewish town to work on. My general results are as follows:—

"Topographically, this place and Tell Nejîleh, six miles south, are the most valuable possessions in the low country, as they command the only springs and watercourse which exist in the whole district. From their positions, their early age, and their water supply, it seems almost certain that they are the two Amorite cities of the low country, Lachish and Eglon. The transference of the names in late times to settlements a few miles off, is probably due to the returning Jews not being strong enough to wrest these springs from the Bedawîn sheep-masters.

"Historically, this town began as an immensely strong fort, with a wall 28 feet thick, on a knoll close to the spring. This is certainly pre-Jewish, by the relative position of Phœnician pottery; and approximately its age would be about 1500 B.C., agreeing well to the beginning of the Egyptian raids under Tahutmes I.[1] This fort, after repairs, which still exist as solid brickwork over 20 feet high, fell into complete ruin. No more bricks were made; rude houses of stones from the stream were all that were erected; and for long years the alkali burner used the deserted hill, attracted by the water supply to wash his ashes with. This corresponds to the barbaric Hebrew period under the Judges. Then, again, the town was walled, Phœnician pottery begins to appear, and some good masonry, evidently the age of the early Jewish kings. Successive fortifications were built as the ruins rose higher and the older walls were destroyed; Cypriote influence comes in, and later on Greek influence, from about 700 B.C. and onwards. The great ruin of the town was, about 600 B.C., that by Nebuchadnezzar; and some slight remains of Greek pottery, down to about 400 B.C., show the last stage of its history. Happily the indications can be interpreted by our literary records, otherwise we could have discovered little about a place in which not a single inscription or dated object has been found.

"Architecturally, though little has come to light, it is of the greatest importance. In a building, which is probably of Solomon's age, or certainly within a century later, were four slabs, each bearing half a pilaster in relief. These pilasters have a quarter-round base, a very sloping shaft, and a volute at the top, projecting, without any separate capital or line across the shaft. The

[1] I should explain that the various Sirius feasts recorded in Egypt leave no doubt that the XVIIIth dynasty was from about 1568 to 1333 B.C., and the XIXth from 1333 to 1160 or later. To date the exodus under either dynasty seems beset with equal difficulties. I incline to the later date.

volute seems derived from a ram's horn. We now see the early date and Asiatic nature of the Ionic style; and we have some definite ground for the temple architecture. A special key to the age of masonry is in the methods of stone-dressing. The use of the 'claw-tool,' more intelligibly called the 'comb-pick,' is distinctive of Greek work in Egypt, and it is known in early work in Greece. As now, on examining the stone-dressing of 1000 B.C., and a gateway and steps of about 750 B.C., there is not a trace of this tooling, it seems almost certain that it is as much of Greek age in Syria as in Egypt. Hence we must attribute the whole of the known walls of the Haram area to Herod and later builders. The use of drafted masonry, with an irregular bump on the face, is fixed to as early as 750 B.C. by the gateway just named; and the use of flaked-dressing (as I may call it), is fixed to 1000 B.C. by the pilaster slabs, agreeing with the work of the supposed Solomonic column by the Russian Church at Jerusalem.

"Pottery is now pretty completely known, and we shall be able in future to date the ages of towns at a glance, as I can in Egypt. Without entering on details, we may distinguish the Amorite by the very peculiar comb-streaking on the surface, wavy ledges for handles, and polished red-faced bowls, decorated by burnished cross-lines. These date from about 1500 to 1100 B.C., and deteriorate down to disappearance about 900. The Phœnician is thin hard black or brown ware; bottles with long necks, elegant bowls, and white juglets with pointed bottoms. Beginning about 1100, it flourishes till about 800, B.C. It developes into the Cypriote bowls, with V-handles, painted in bistre ladder patterns, which range from about 950 to 750 B.C. Due also to Phœnician influence, seem to be the lamps from about 900 to 750 B.C., formed by open bowls pinched in at the edge to form a wick-spout. These were succeeded in the time of Greek influence, from 750, by the same pinched type, but of Greek ware, and with a flat brim. The Greek influence is also seen in the massive bowls of drab pottery, like those of early Naukratis, and the huge loop handles, such as belong to both Naukratis and Defenneh before 600 B.C. All these approximate dates are solely derived from the levels of the walls and the thickness of the deposits; but they agree well with what is otherwise known.

"As unfortunately the Turkish Government claims everything, all the perfect pottery has been taken by the officials, and the stone-work is left to be destroyed by the Bedawîn. Casts, photographs, and potsherds (such as any visitor can pick up here), are all that may be brought to England. These will be exhibited this summer in London, probably along with my Egyptian collections of this season.

"It is much to be hoped that some fresh explorer will come forward to take up this Syrian work, of which we have only been able to lay some of the foundations by the excavations of this spring. Much more has to be done before we can settle the historical problems which await solution in this land."

Herr Schick, our worthy agent in Jerusalem, though incapacitated from active work for some time through illness, did not fail to report all discoveries of interest in and outside of Jerusalem. A few may be mentioned, which have already been published in the *Quarterly Statement*, viz. :—

1. The excavations outside the Damascus gate in the ground of the Domini-

cans, a little to the east of the smaller church discovered in 1880, had exposed additional fragments of masonry, bases of columns, doorsteps, &c., thereby giving sufficient detail to show the foundations of another church, much larger than the former one, and measuring 130 feet by 73 feet. Mr. Schick suggests this to be the original church of St. Stephen's. In the same neighbourhood have been found some rock-hewn tombs, with rolling-stone doors, bearing Greek inscriptions and mason's marks.

2. On the eastern brow of Zion some rock-hewn chambers have been cleared out, which showed evidence of having been used in ancient times as dwellings. These are on the property of a French gentleman, who kindly allowed Mr. Schick to examine and plan.

3. In the village of Silwân three little rock-hewn chapels were found; they are most remarkable, cut out of the solid rock, and from an inscription in the apse of the centre one, appear to have been dedicated to the memory of the prophet Isaiah. Indications of another rock-hewn church, of which the apse remains, were found and noted by Herr Schumacher near 'Athlît.

4. At the Pool of Bethesda the discovery of a fresco on the wall over the Pool, representing an angel troubling the water, is of great value, proving that in crusading times the spot was regarded as the site of Bethesda.

5. Mr. Schick, during the paving of the streets in Jerusalem, obtained some more rock levels; from these, with former ones, he has given what he thinks is the top or form of the Acra terrace.

6. As the stones of one of the immense cairns or mounds in the Plain of Rephaim were being removed for road purposes, a peculiar upright stone was revealed having regular tooled grooves running obliquely towards the centre of the stone on the one side; there are also some curious holes in it.

7. An obelisk, broken, originally about 45 feet in height, was found in the Theatre at Cæsarea; this is believed to be the first obelisk found in Palestine.

We have received from Herr Schumacher (1) a photograph of a very richly ornamented tomb found near Shefa 'Amr, which was published in the October *Quarterly Statement* for 1889; (2) a photo of a Greek inscription found on a flat rock near the important ruins and spring of Khurbet Husheh. This inscription was pointed out to Herr Schumacher by the Rev. P. Van Kasteren, of the St. Joseph's University, Beyrout; (3) a few days ago ten photos and a description of the figures cut in the rock in Wâdy 'Akkâb, opposite Tyre.

To the Rev. J. E. Hanauer the Committee are indebted—

(1) For an account of the cave near Sarîs, with the curious figures carved on the walls.

(2) For a copy of a Greek inscription which he discovered at Beit el Khŭlîl.

(3) For a collection of Judeo-Spanish proverbs.

(4) For several photos of interest, including the rock-cut altar near Zorah.

(5) And for various notes of interest obtained on the spot.

In the April *Quarterly Statement* was published a very interesting paper on the Sects and Nationalities of Syria and Palestine, by Rev. Geo. E. Post, M.D., who has articles in hand on Palmyra and the Bedawîn.

In the same number is an able and learned paper on Mâlula and its Dialect, from F. J. Bliss, B.A., who promises an exhaustive account of the Druses, &c.

Publications.

"The Bible and Modern Discoveries," by Henry A. Harper, was published in December. It is an endeavour to present in a simple but yet connected form the Biblical results of twenty-two years' work of the Palestine Exploration Fund. The writer has also availed himself of the discoveries made by the American Expeditions and the Egyptian Exploration Fund, as well as discoveries of interest made by independent travellers. The Bible story, from the call of Abraham to the Captivity, is taken, and details given of the light thrown by modern research on the sacred annals. Eastern customs and modes of thought are explained whenever the writer thought they illustrated the text. To the Clergy and Sunday School Teachers, the writer hopes this work will prove especially useful. He is personally acquainted with the land, and nearly all the places spoken of he has visited, and most of them he has moreover sketched or painted. The work is in one large, handsome volume of 600 pages. It is illustrated with many plates, and a map showing the route of the Israelites and the sites of the principal places mentioned in the sacred narratives. The work has had a very gratifying reception. The whole of the First and Second Editions are gone, and a Third Revised Edition is nearly exhausted. It is proposed that Mr. Harper write a second volume to complete the old Testament and also take in the New Testament.

For a long time it has been desired by the Committee to present to the world some of the great hoards of information about Palestine which lie buried in the Arabic texts of the Moslem geographers and travellers of the Middle Ages. Some few of the works, or parts of the works, have been already translated into Latin, French, and German. Hardly anything has been done with them in English, and no attempt has ever been made to systematize, compare, and annotate them. This has now been done for the Society by Mr. Guy le Strange in the book "Palestine under the Moslems," just prepared and issued. The work is divided into chapters on Syria, Palestine, Jerusalem, and Damascus, the provincial capitals and chief towns, and the legends related by the writers consulted. These writers begin with the ninth century and continue until the fifteenth. Illustrations required for the elucidation of the text are presented with the volume.

The Committee are in great confidence that this work—so novel, so useful to students of mediæval history, and to all those interested in the continuous story of the Holy Land—will meet with the success which its learned author deserves.

Northern 'Ajlûn "Within the Decapolis," by Herr Schumacher, was published in April. It contains an account of his journey between the Jabbok and Yarmuk and is fully illustrated with a map, plans, and drawings of the ruins tombs, dolmens, inscriptions, &c.

Of the Memoirs of the Western Survey there are only some 15 sets left of the 500 printed.

The Survey of Eastern Palestine as far as accomplished by Major Conder was published in 1889. This volume has been sent out to subscribers.

The Archæological Mission of M. Clermont Ganneau. The illustrations of this work are being reproduced from the beautiful drawings of M. Lecomte, and will be ready in a few days for the letterpress.

The Fauna and Flora of the Wady Arabah, by H. C. Hart, is in the press, the plates are almost ready, and will be issued before the end of the year.

The New Map of Palestine.—The Committee are pleased to say that the new map which has been so long in hand is now ready. The map takes in both sides of the Jordan and extends to Baalbeck and Damascus in the north, and to Kadesh Barnea in the south. It is compiled chiefly from the surveys of the officers of the Fund by George Armstrong, the Assistant Secretary, and revised by Colonel Sir Charles W. Wilson and Major C. R. Conder.

The scale is $\frac{3}{8}$ of an inch to the mile. All modern names are in black, and over these are printed the Old Testament and Apocrypha names in red; New Testament, Josephus, and Talmudic names in blue; clearly showing at a glance all the identifications of the places that have been obtained. Those marked with a ? are doubtful.

The price to subscribers to the Fund will be 24*s.*; to the public £2.

Raised Contour Map of Palestine.—The Committee have pleasure in bringing before you for your inspection a raised contour map of Palestine, which is now nearing completion.

It has been for a considerable period in course of construction by Mr. Armstrong, the Assistant Secretary.

The contour lines on the west of the Jordan represent a rise of 100 feet; those on the north and east, a rise of 200 feet each.

It is on the same horizontal scale, and gives nearly the same extent of country as the new map hung alongside of it.

Museum and Office.—The Committee have to report that all the objects of antiquity belonging to the Fund were removed from the South Kensington Museum, and are now in Messrs. Taylor's Depository until suitable rooms are secured, which will serve for both the Office and Museum. The Committee have rooms in view which they hope to take early next year.

Since the last Annual Meeting the following reports and papers have been published in the *Quarterly Statements*:—

By Herr Schick—

"On the Discovery of an Old Church in Jerusalem;" "On Tombs, Inscriptions and Roman Tiles on the Mount of Olives;" "On Tombs with Rolling-Stone Doors, Inscriptions, Masons' Marks, and Large Cisterns North of the Damascus Gate;" "On Caves on Eastern Brow of Zion;" "On Rock-cut Chapels at Silwân;" "On the Fresco of an Angel over the Pool of Bethesda;" "On Remains of the Old City Wall;" "On Supposed Druidical Stone on the Plain of Rephaim;" "On Subterranean Passages at Gibeon;" "On Tombs at Aceldama," &c., &c.

By Rev. J. E. Hanauer—

"On the Discovery of a Cave with Curious Figures at Saris;" "An Inscription at Beit el Khŭlîl;" and "A Note on the Dead Sea being Visible from Jerusalem."

By Herr Schumacher—

"On Sarcophagi near Akka;" "On Tomb with Curious Figures near Shefa 'Amr;" "On a Rock-cut Semi-circular Apse near Tantura;" "On Inscriptions," &c., &c.

By W. M. Flinders Petrie—

"Notes on Places visited near Jerusalem;" "Report of the Excavations at Tell Hesy."

By Rev. Dr. Camden Cobern—

"A Visit to the Scene of Excavations."

By James Glaisher, F.R.S.—

"Monthly Tables of Meteorological Observations taken near Jaffa for the Years 1885, 1886, 1887, and 1888."

By Rev. George E. Post, M.D.—

"Essay on the Sects and Nationalities of Syria and Palestine;" "The Roebuck in Palestine."

By F. J. Bliss, B.A.—

"Ma'lula and its Dialect."

By Dr. Selah Merrill—

"Birds and Animals New to Palestine."

By T. Chaplin, M.D.—

"On Gihon."

By Major C. R. Conder, R.E.—

"On Norman and Norman Fiefs in Palestine;" "On the Vannic Language;" "On the Hittite Prince's Letter;" "Notes on the Holy Sepulchre;" "The Date of Eshmunazar's Coffin;" "The Old Wall Outside Jerusalem;" "The Tsinnor;" "Ku for King the Seal of Haggai;" "Bezetha;" "Esau's Head;" "Native Name of Palmyra;" "Pella;"

"New Hittite Bas-Reliefs;" "The Mâlula Dialect;" "The Greek Inscriptions North of Damascus Gate;" "Dr. Post's Paper;" "The Inscriptions of Edrei," &c., &c.

By Professor Sayce—
"On the Accadian Word for King;" and "The Inscription of Saris and Mount Olivet."

By William Simpson, F.R.G.S.—
"On Irrigation and Water Supply of Palestine."

By Col. Sir Charles W. Wilson, R.E.—
"On the Tell es Salahiyeh Monument."

By Henry A. Harper—
"On Jewish Lamps;" and "The Way of the Philistines."

By Rev. Canon Greenwell—
"Note on Ancient Axe-heads."

By Mrs. Finn—
"Notes on Mosaic and Embroidery in the Old Testament;" "On the Old Walls of Jerusalem;" "On Greek Inscriptions;" On Sunbirds;" "On Nehemiah's Wall;" "On the Mounds on the Plain of Rephaim;" "On the Waters of Merom," and "On the Tsinnor."

By Rev. W. F. Birch—
"On Nehemiah's Wall;" "Nehemiah's Defence of the Gutter Tsinnor;" "The Pool that was Made;" and "The Siloam Inscription."

By Gray Hill—
"On Irrigation and Water Supply of Syria;" and "Mashita."

By Rev. Canon Gover—
"On the Waters of Merom."

By Dr. Murray—
"On the Greek Inscriptions found on some Tombs North of the Damascus Gate."

By Professor Hull—
"On the Site of Calvary."

By Rev. Henry Brass—
"On the Site of Capernaum;" "The Cave of Adullam;" and "The Place of Elijah's Sacrifice."

By George St. Clair—
"On Nehemiah's Wall;" and "Sutekh, the Chief God of the Hittites."

By Rev. James Neil—
"On the 'Slime Pits' in the Vale of Siddim."

The following is the Balance Sheet for the year 1889, which was published in the April *Quarterly Statement*:—

BALANCE SHEET FOR THE YEAR ENDING 31st DECEMBER, 1889.

Receipts.	£	s.	d.
January 1, 1889—			
To Balance	402	9	0
December 31, 1889—			
Donations, Subscriptions, and Lectures ..	1,521	9	0
Maps, Memoirs, and Books	988	3	2
Photographs	37	16	11
	£2,949	18	1

Expenditure.	£	s.	d.
By Printing and Binding	920	18	3
Maps, Illustrations, and Photographs..	462	12	11
Exploration.. ..	163	3	0
Stationery, Advertising, and Sundries	112	17	10
Postage, Parcels, including the *Quarterly Statement* ..	113	7	4
Salaries and Wages	280	12	4
Rent	121	0	0
Loan paid off ..	400	0	0
Balance in Bank, 31st December, 1889 ..	375	6	5
	£2,949	18	1

W. Morrison,
Treasurer.

TREASURER'S STATEMENT.

This year, like the last, has been one mainly of printing and of publishing results. Thus the expenses of publishing amount to £1,383 11*s.* 2*d.*, against which must be set £1,026 0*s.* 1*d.* produced by sales. Considering that the *Quarterly Statement*, which costs about £500, is given away to subscribers to the Fund, and that great liberality is observed in the allowance to subscribers on the books, these figures show very good results. The amount set down as received, it must be observed, does not include advertising the books or the publisher's commission, but shows the net results.

Management shows a pretty constant expenditure of £627. New exploration only required £163 last year. As the Committee are at the present moment organising new work, it will be very much heavier next year. The debt of £450, which appeared in my last Statement (*Quarterly Statement*, April, 1889) is now paid off, leaving only a small sum due for interest. The only liabilities of the Society are certain current printers' and engravers' accounts.

The position of the Society, if we enumerate its books, with copyrights and stock of books, its collections, and its maps, is perfectly sound and solvent.

In other words, out of a total expenditure of £2,175 the proportion is as follows :—

Publishing	·64.
Excavations	·07.
Postage	·05.
Management	·24.

Walter Morrison, *Treasurer.*

The number of subscribers is steadily, but not rapidly increasing; since the date of last meeting some 187 have joined the annual list.

The Committee desire again to record their special thanks to their Honorary Local Secretaries for their efforts so cheerfully and readily made on behalf of the Society's work.

The Committee have to announce with regret the death of six members of the General Committee since the last Annual Meeting, viz.—

Earl of Carnarvon.
Col. Sir Henry Yule, C.B., R.E.
Sir George Burns, Bart.
General Sir Howard Elphinstone, K.C.B.
George Jackson Eldridge, Esq., C.M.G., H.B.M., Consul-General, Beyrout.
Rev. H. Hall-Houghton.

The Committee propose that the following gentlemen be invited to become members of the General Committee:—

The Duke of Norfolk.
Major C. M. Watson, C.M.G., R.E., War Office, Horse Guards.
Sir John Coode.
der Stuart Murray, Esq.
Reginald Stuart Poole, Esq., LL.D.
H. Rylands, Esq., F.S.A.
Bishop of Lincoln.
Bishop Blyth, of Jerusalem.
P. Le Page Renouf, Esq.
James Melrose, Esq.
Rev. James H. Rigg, D.D., Principal of the Westminster Training College.
Dr. D'Erf-Wheeler, Jerusalem.
J. R. Barlow, Esq.
T. Rymer, Esq.
Rev. W. H. Rogers, D.D.
Herbert Birch, Esq.
Rev. Thomas Harrison.
H. C. Kay, Esq.

The Chairman.—We have the pleasure of having Mr. Petrie with us, and I should like to know whether he would like to add anything to what has been said in the Report.

Mr. Flinders Petrie.—I do not wish to suggest any additions to that Report as a Report. I have stated in it as briefly as I can the principal heads of information, and I think that will be all that I should wish to state for the present in the Annual Report until you shall decide what form the further and more detailed publication will take.

Mr. Walter Morrison.—Everything I can tell the Committee has been stated by Mr. Flinders Petrie. I should like to ask Mr. Petrie one question. In the Report it is mentioned that he identifies Lachish with Tell-el-Hesy. I don't know how far this is from Umm Lakis.

Mr. Petrie.—They are about 3 miles apart. It has been supposed that Umm Lakis and 'Ajlân must naturally be Lachish and Eglon, which were near together. But neither of these sites can be ancient, as they only contain a small depth of Roman pottery. Tell Nejîleh, which I suppose to be Eglon, is about 6 miles from 'Ajlân.

Mr. Morrison.—We know that in Oriental countries an important town does shift about. We have the cases of Memphis and Cairo, of Delhi, and of Jericho.

Mr. Petrie.—My reasons for identifying these sites are that we know Lachish and Eglon to have been the two principal towns of the Amorites in the low country, and Tell Hesy and Nejîleh are the most valuable positions in that district as commanding constant springs, whereas every other place depends on wells. As moreover I find at these places the only two great Amorite cities that I have seen in all the district, it seems almost certain that these are Lachish and Eglon, which must have been in this part. My supposition is that after the Jews were removed the Bedawîn would push up into this country, and naturally seize on these springs for their flocks and herds. The Jews returned here in feeble force, and were not strong enough to eject the Bedawîn; they therefore occupied the nearest points they could within sight of the old places, on the opposite hills; the families from Lachish founding Umm Lakis (which implies in Arabic "a descendant of Lachish"), and the families from Eglon founding 'Ajlân.

Mr. Morrison asked a question with reference to the masonry of the south-east corner of the Haram area being Herodian.

Mr. Petrie.—That is just a question how long those signs as masons' marks may have existed. One can hardly use it as a conclusive argument. The question of the stone-dressing seems to me very important. A certain peculiar form of tooling, "claw-tooling" or "comb-picking," is known in Greece before it is ever known in Egypt. Subsequently we find it used in Egypt in Greek times, and it is abundantly used in Palestine. That is entirely absent from the masonry we now know belonging to the period of the Jewish kings; there is no trace of that, and as it belongs entirely to the Greek period in Egypt, it is a very strong argument that where we find this tooling we must suppose it to belong to the Herodian period in Palestine.

Mr. Morrison.—I follow that. What does Major Conder say about it?

Mr. Petrie.—It was satisfactory to see that the method of dressing the stone at Tell Hesy, probably 900 or 1000 B.C., was exactly similar to that on the column at the Russian Church, viz., by flaking it away so that the surface appears to be hollowed out in a series of flakes, and that was further reduced by pick-working, which left the surface what I may call the pocke surface. I found only one such stone re-used in the Triple Gateway of Jerusalem.

Mr. Morrison.—We use the claw-tool, or comb-picking, now. A sort of hammer with a number of sharp points.

Mr. Petrie.—They use that also in the East. At present my belief is that it was a Greek invention, imported by the Greeks into both Egypt Palestine.

Mr. Morrison.—Major Conder is very strong about that.

Mr. Petrie.—There is no question it is the essential means of judging of the period of the stone, and I think we have now much firmer grounds for our judgment in having got early masonry of which we can be certain of the date to within a century. There is a point I should be glad to hear the opinion of the Executive Committee on, which might almost be laid before the present Committee, as to whether the circumstances will justify us in adopting the name Lachish for this site provisionally, instead of referring to it as Tell Hesy, which does not convey a definite idea to most people. I don't know how far it might be suitable to assume that identification and proceed upon it, but it will simplify matters rather in writing on the subject if we can at once venture to adopt this identification of this place as Major Conder suggested.

Mr. Guy le Strange.—Was the identification made before you went there?

Mr. Petrie.—Yes. Major Conder suggested it some time before that. I now can prove it to be distinctly an Amorite fortress from the section shown, and a fortress of great strength and great importance, and that the Umm Lakis is certainly of the Roman period. We have destroyed the rival, and we have greatly strengthened the case for Tell Hesy by finding the early wall and proving the early date of it. The distance between is three miles.

Mr. Guy le Strange.—Is there a place called 'Ajlân there now?

Mr. Petrie.—Yes, between Tell Hesy and Umm Lakis; almost midway between the two.

Mr. Guy le Strange.—Umm Lakis is not known in the old Arab chronicles. There is mention of 'Ajlân in that part of the world in the early chronicles, but only once, though. There is the well-known place, Ajlûn, east of the Jordan, but there is an 'Ajlûn in the chronicles mentioned in that part of the world too, once or twice only.

Mr. Petrie.—I may say that Tell en Nejîleh is within sight of the place now called 'Ajlân; they are only about 5 miles apart.

Mr. Basil Woodd Smith.—In the absence of Lord Sidmouth I beg to move the adoption of the Report. It does not require a speech from me, because Mr. Flinders Petrie has made a more effective speech. An

unlearned and untravelled Englishman could not deal with it so exhaustively. It must be very gratifying to us to find that the Fund is still so vigorous, and that it promises to go on doing even greater things in the future. I have been looking at the new raised contour map and it strikes me as being very effective indeed. It gives me a more vivid idea of the contour of Palestine than I have ever had before. It presents to the eye clearly and distinctly the qualities of the surface of the land. I have great pleasure in moving the adoption of the Report.

Mr. Henry Maudslay.—May I add a word? In the case of blind people that map would give the finest explanation possible; they would pass their fingers over it and ascertain in a moment the main features of the country. To my mind it is one of the most beautiful and effective things I have seen.

Captain A. M. Mantell, R.E.—We have to congratulate ourselves that so much has been done during the last 12 months. I remember in '80 or '81, when I had the pleasure of going out with Major Conder, there was a great talk of our getting a new Firman, and that talk has gone on until 10 years have elapsed, and it is a great satisfaction to think we have now succeeded in getting rid of the obstruction. I have much pleasure in seconding the adoption of the Report.

The Chairman.—Having that Report of Mr. Petrie before us and Mr. Petrie himself here, I should like to move that our best thanks be given to Mr. Petrie for his exertions. When he was at Jerusalem it was very cold, and I know he has gone through very great extremes of heat and cold, as those who go to Palestine generally experience. I trust the experience he has had in that country, the good work that he has done, are indications of other good works that he will be induced to follow up next year, for I did hear when he was there—and I didn't wonder at it at all, frozen one day and melted the next—under those circumstances he would go there no more. I hope, however, and I know I am not alone in that, that he will see his way, "as it is only broken ground," to use his own words, to follow up the work next year; to start in the good time, and knowing as he does the country now, and knowing the people and others, that we may have to thank him another year for the services he will have rendered between now and our next Annual Meeting. I would ask the Treasurer if he would kindly second that vote of thanks.

Mr. Morrison.—I should be very happy indeed to second that vote of thanks. I am sure what has fallen from Mr. Petrie to-day is sufficient to whet our appetite for fresh discoveries. It seems as though there were a considerable field, and Mr. Petrie, with that instinct which comes I suppose from practice—like the blacksmith's arm—will be enabled to hit upon the right spot. No doubt in this particular case it was rather a hurried matter, and there was not sufficient time for Mr. Petrie to go out to make his way, and do full justice to the opportunities offered to him.

A Member having asked if the Firman allowed of excavations in any part.

The Chairman said :—I was going to speak of that. Our Firman was confined to ten square kilometres, but I am in hopes that directly we can find another site, after having broken ground, we shall have very little trouble in getting a new Firman. Ten years have passed of great anxiety, but I can assure you that we have never forgotten that dropping water will wear away a stone. Perseverance will gain our ends I have very little doubt. I can only say we are greatly indebted to the Marquis of Salisbury, and I think he never flagged for a single moment from the first attempt, and I have no doubt we shall have the same assistance when we apply again. Now, gentlemen, you have heard the motion.

The resolution was put to the Committee, and carried unanimously.

Mr. Petrie.—I thank you most sincerely for your very kind expression concerning my work. It has been a very great pleasure indeed to me to undertake what I have done, especially as I think that I have been able to lay a foundation for future work by getting the pottery and the masonry accurately dated, which will enable others, I hope, to be as successful in examining sites, and with more certainty than they could have done before. I am almost afraid that Egypt has greater attractions for me than Palestine, but in any case it will be my pleasure to give any assistance I can in helping others towards the work, or giving any information I can from the small experience I have had in the country. (Cheers.)

The Chairman.—Gentlemen, there is another duty to perform. Mr. Schick has done his work well. I had doubts upon some things, but it took a load from my mind to hear from Professor Lewis, who has just returned from a visit to Jerusalem, that the measurements that had been sent to us were correct. He tells us every one—angles, direction, and length of line, was found to be accurate. It is a very important thing that we should know that anyone who is there sending us information is careful in his measurements, and doesn't jump at conclusions. For the good work he has done for us, and the constancy with which he has worked, I should like to ask the Committee to thank this coadjutor who has worked so exceedingly well.

Mr. William Simpson.—I have very much pleasure in seconding that. I think we could not do otherwise than pass a vote of thanks to him.

The resolution was put to the Committee and carried unanimously.

The Chairman.—Well, gentlemen, who would have imagined that an over-wrought man, writing here, writing there, ever engaged in artistic work, would find any time to devote to us? Who would have thought that Mr. Walter Besant, who is so energetically at work, and so usefully in so many things, should find time to come here, so that what he had done for us entitled me to move our thanks be given to him. That which he has done has been effective, as is everything he does. It is an early ove, as Mr. Petrie says his early love for Egypt will overcome his

love for Palestine. Mr. Besant is here. If he were not, I have a note from him which is of an earnest nature, and I do ask you to give a warm vote of thanks, and I feel sure, under the circumstances in which Mr. Walter Besant is placed, that you will thank him, and thank him very warmly for being with us. Everyone in the room, I know, would second that, but, Professor Lewis, you know his work best, and I will ask you to do so.

Professor Hayter Lewis.—I am extremely glad to second that. He collects valuable information and puts it in a way which everyone can understand and thoroughly enjoy, and he uses his interest in every way for the advancement of the Fund. I am quite sure I should do my duty very imperfectly if I didn't second, with my heartiest good will, the resolution you have moved. (Cheers.)

The Chairman.—It is passed by acclamation. I need not put it to the meeting. Mr. Besant, the meeting has thanked you for those good services you have rendered.

Mr. Walter Besant.—I really do not deserve your thanks. I have been here very little indeed, and all the real work of this Society has been entirely done by Mr. Armstrong. I have not been here for the last ten days more than once. I am always very anxious to carry on the work in which I have been engaged so long and so happily, and as long as I can continue the work you may depend on me.

The Chairman.—I have yet one other motion. You see this contour map, that map has been done entirely by Mr. Armstrong, not in his office hours. There is a deal of work to be done here, no one knows it better than I do. It is a map that, I think, answers all the desires that I have heard expressed from time to time. Here we have something that speaks, and will speak, to the good work of the Survey. Just see. So far as the Survey extends we know everything. South and east of that much is uncertain or unknown. How is this map to be reproduced? It has been a subject for thought, how it can be readily reproduced and how it can be brought into schools and have a general application, even that application which my friend Mr. Maudslay referred to just now, that the blind would feel and know how deep a certain part was below the level of the Mediterranean, and so in every other part of it. It is one that I feel exceedingly proud of. Look how well these two maps—the raised contour and new map of Palestine—will work together. This has been part of the work in the past year, and therefore as Mr. Armgtrong has performed his duties to my *entire* satisfaction, and in addition has prepared this map of which I am proud, I should like to move that our thanks be given to Mr. Armstrong. I will ask Dr. Chaplin, knowing the value of the work, to second this resolution.

Dr. Chaplin.—It affords me very much pleasure, sir, to have the opportunity of seconding the vote of thanks to Mr. Armstrong for this very valuable work. I have had the pleasure of seeing it in the course of its progress from month to month, and I know how very much labour and thought Mr. Armstrong has bestowed upon it, and I also know what

has already been said, how very much occupied he is in this office, so that I think the time he has bestowed upon it, and the skill and judgment which he has displayed in connection with it are exceedingly creditable, and we owe him really a very warm vote of thanks.

Mr. Armstrong briefly returned thanks.

Mr. Guy le Strange moved and—

Mr. Henry Maudslay seconded the re-election of the Executive Committee. This was put to the meeting and carried unanimously.

Rev. W. J. Stracey.—Before we separate there is one more vote of thanks which is due, and that is to our Chairman. I should judge by his looks that he must be as old as I am, but he is a very much younger man than I am myself really. I will only say, as regards Palestine, that I look back to my short tour there ten years ago with the greatest pleasure I almost ever had in my life. I never went anywhere where I had so much satisfaction. I make a point of telling all my friends, particularly the younger clergy, that they cannot do better for themselves than to take a holiday of two months and go to Palestine. I beg to move that our very best thanks be given to you, Mr. Chairman, for your presidency on this occasion.

Mr. Henry Maudslay.—I have had the honour of being requested to second this motion, and I shall do so in the very fewest words. The Chairman has my most entire and hearty consideration, and I am quite sure that his devotion to the work which he has done so efficiently warrants and ensures its continuance. Without his application and perseverance I think the thing would, perhaps, have died a natural death long ago. It is reported that Queen Mary said she should have the word "Calais" written on her heart. I am quite sure that our Chairman has the word "Jerusalem" written upon his heart, and "Palestine" written in his head and in his thoughts. I am quite sure he will carry out this work as long as God gives him strength, for the furtherance of the object that we have in view. I beg to second the resolution.

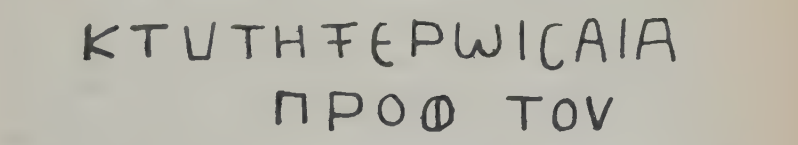
Put to the Committee and carried unanimously.

The Chairman.—I thank you very much, because I understand that this vote is not individually addressed, but to the Executive Committee who aid me so well and so effectively, and work so well. This I can assure you, that all that is in my power I certainly shall do; and knowing this vote is to the Executive Committee, and knowing them so well, I am certain they will do so. I hope that this time next year, as I have already said, Mr. Petrie will be here to report again; but I first wish to express my individual thanks to him for the deep concern he has shown in the interests of the Fund. I can only say, in the name of the Executive Committee, I thank you very sincerely for the kind vote you have just given me. I hope we shall have a good Report next year.

The Committee then adjourned.

NOTES ON PLACES VISITED IN JERUSALEM.

Silwan.—The Isaiah tomb is now in custody of the Franciscans, who have made it into a chapel, kept locked up. The published inscription is not quite correct; apart from the curvature it is



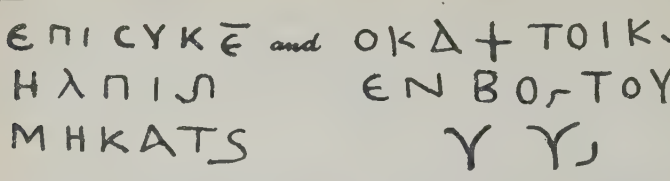
There is no trace of a letter between προφ and του. The surface is rough picked, and rubbed down partly, before inscribing. Greek inscriptions were used till crusading times here (as in the Anarulph inscription), but such have the *a* made in the Coptic form ⲁ, *φ* as *φ*, and not as here Φ. Professor Lewis noted some small corrections in the restored plan of Herr Schick.

Absalom's Tomb appears to be of several periods. From the position of the entrance it was probably a rock tomb decending in the surface of the open field originally; the steps and rough chamber being of this age. Secondly. It was cut around and isolated in the Herodian age. Thirdly. the side recesses for bodies were cut in the sides of the chamber; certainly later than the moulding round the top of the chamber, which is cut into by them. That the entrance at the top of the steps was used in the second period, is shown by the relief circle carved on the stone over it, which does not occur in any other part of the top.

The tomb of St. James, near it, has also been originally different, as there are signs of a square shaft as the original entrance, altered by being cut away on one side to form the present steps.

Church of St. Stephen outside Damascus gate. There can be no doubt as to the general form and size of this building. A pier was found by us just where it was required to match an existing one, so that there are now four known, in two pairs. The apse was plastered over on the outside with plaster, with irregular flakes of limestone imbedded in it. This plaster remains against the outer earth, after the stones have been removed, and shows all the joints of the wall which existed there. The present blocks around the apse have all been roughly placed there by the friars. They have also made up part of the apse outline with loose blocks, but the steps leading up to the apse on either side are quite undisturbed, and are of fine red clouded marbly limestone. The great excavations in the rock are later than the church and its destruction, as they are cut askew to it, and were filled with rubbish; moreover pieces of the broken columns of the church were used in the filling up of low parts of the sides of the hollows.

A tomb lately opened there has the stone door, with iron ring for the pivot, and iron nails for the lock. The inscriptions over these tombs are—



Mosque of El Aksa.—With regard to the age of this, the irregular use of materials which are of the age of Justinian, the capitals which do not match, the stumpy columns built up of odd material, and unsuitable proportions of the monolith columns in parts, seem to conclusively show that it must have been built after the Arab conquest, as Professor Lewis maintains. But it appears that its original form was totally un-Arab, a pure basilica, of nave and two aisles, with the clerestory arcade work, above the nave arches, which is purely Roman in design; a Christian architect was doubtless the constructor of this. The special point to note is the extraordinary thickness of the piers which bound the aisles; these seem to me to be the thick outer walls of the original basilica form, pierced through with arches so as to extend the mosque into the Arab type of a large number of low colonnades, or forest of columns. Professor Lewis does not see any objection to this view of the independent basilica form being the first, and extended later on, though he strongly holds to the large area of the colonnades in early Arab times.

Rock Tombs. The regularity of many of these tombs suggested that they were cut to measure; and on measuring them it is found that the same lengths recur frequently. Thus (in metres, the only measure I happen to have here) there are lengths found of 2·22, 2·23, 2·24, 2·27, 2·28, 2·29, 2·30, and 2·31, all evidently intended for the same quantity; again, there occur 2·81, 2·83, 2·83, 2·84, 2·84, 2·84, 2·85, 2·87, 2·88, 2·90, 2·91, 2·93, 2·93, and 2·94 metres; and this extent of variation is not more than is often found in one single chamber owing to accidental errors in the excavating. From those tombs which I have already measured it is certain that more than one cubit was used, and in two cases there is valuable evidence of a part being cut by one cubit, and a later chamber being cut out with a different cubit. The cubits found are—

Inches	±	
25·12	·1	One chamber of tombs of Judges, with other chambers cut later with 22·5, leading from it.
23·83	·06	Four chambers of one tomb, near Judges, with later chamber on 22·5 cut from it.
22·55	·04	Eighteen tombs, tomb of Judges and others by it, and tombs of Hinnom. No variation in amount in different places.
15·46	·08	Six tombs in valley of Hinnom, one with moulding and therefore late. (Herodian.)

The 25·12 is already known to be probably the sacred cubit of the Jews; and 22·5 is the double of the Phœnician foot. I should say that all the results were worked out in metres, in which form I could not recognise the resemblance to known measures, which I am familiar with in inches; hence I could not have the faintest prejudice or inclination to adapt the results to cubits already known. I hope to obtain more material and work out these results more fully in future.

Future Work required in Jerusalem.—A great deal of clearance has been made in Solomon's stables by the late Pasha here, and the inner ends of the triple gate opened out on the Haram area. Thus much more can be seen of the masonry; and four periods are traceable, probably ranging from Herod to Justinian. I am told by Professor Lewis that the lowest blocks of the great wall on south-east are dressed with the "claw tool," or *comb pick* as it may better be named. This tooling is, in Egypt, characteristic of Greek work, and is well known early in Greece (Parthenon, &c.); hence it gives a strong presumption that the whole of the south-east wall is of Herodian work. If so, it is very unlikely that Solomon's wall occupied that line, as if it did its lowest courses would have been buried in the rubbish, and used by Herod for his foundations. Hence the most urgent question is whether any trace of Solomon's wall can be found *within* the line of the present wall. To settle this, some excavations in Solomon's stables are needed. Probably the best place would be in the internal angle between the great corner tower and the east wall where two sides of the pit would be of masonry, with ledges to fix timbering, &c., upon; thus we should learn whether the wall is backed (1) with earth, (2) with vaults, or (3) with a rock scarp; also (4) whether there is any sign of Solomon's wall or foundations. Other pits might be sunk to find the rock, and search for walls or masonry, between this and the outcrop of the rock in the triple gate.

It is also very desirable to open and examine the vaults beneath the raised platform of the Haram, but these are jealously guarded from any chance view.

W. M. Flinders Petrie.

EXPLORATIONS IN PALESTINE.

Early in February a vizierial permission was granted for excavations about Khurbet 'Ajlân, and an area of 9½ square kilometres in that neighbourhood. And as soon as the packing of my Egyptian collections was finished, and they had been inspected by the Government, and a bad attack of influenza had been overcome, I left Egypt for Syria, arriving at Jaffa on March 9. The season was unusually late; no rain had fallen till Christmas, and the spring rains lasted heavily till the beginning of April; the last day of March there was a furious storm over all south Palestine; a white squall, which I saw tearing along over Jaffa at the rate of an

express train, breaking shutters and windows there in a way not known for years.

Although the permission was signed, it unfortunately contained a trifling error of description, which for form's sake was rectified ; but this produced so much delay that the paper did not reach Jerusalem, where I was awaiting it, till March 29. For nearly three weeks, therefore, I was unable to forward the business at all, as no steps could be taken until the original document could be presented to the governor, Reshad Pasha. This time was not, however, all wasted, as I was fortunately able to examine and discuss the various buildings and remains of masonry with Professor Hayter Lewis and Dr. Chaplin ; and thus I learnt, I cannot say much, about the antiquities, but rather I found how provokingly little is positively known, and in what a vast uncertainty almost every question still remains. Perhaps to learn our ignorance, at first hand on the best authority, was as useful a preparation as I could have for appreciating scraps of information. It is easy and simple to speak of Solomonic masonry, the Jebusite rock-scarp, &c. ; but when the positive proofs of such ages are enquired into, the constant resource must be the answer, "There is nothing certain in Jerusalem." If ever the history of the city is to be clearly settled, it must be by learning the archæology of Syria in other and less complicated sites, and then applying the knowledge of stone-working, of construction, and of pottery to fix the ages of things in erusalem.

But while waiting I began on a fresh enquiry which had not hitherto been opened. The abundance of rock-hewn tombs about Jerusalem is well known, and many of them have been surveyed and published. Much yet remains to be done in this matter, but it would need a considerable time in Jerusalem to work out the subject. The dimensions of those that are cleared are, however, easily taken, and hence we may examine whether they were wrought by measure, and, if so, what measure or cubit was used by the masons. Over fifty tombs I thus measured, from mere single chambers, up to the complex arrangements of the "Tombs of the Kings." From these it was abundantly plain that some measure was generally used, not only from the regularity of the sides of a chamber, but also from the repetition of the same length in ten or a dozen different tombs. The details of the results must be published with reference to the already published plans of several of the tombs : but the general results are that far the commonest cubit is of 22·6 inches, which is evidently the Phœnician cubit of 22·3 at Carthage, and known in the Hauran. Earlier that this, and in the "Tombs of the Kings," there is a cubit of 23·7 ; there is also one tomb of a cubit of 25·1, which is the Hebrew, Assyrian, and Persian cubit of 25·1 to ·3, and in the valley of Hinnom only are tombs cut to a cubit of 15·5 inches, which seems to be peculiar to Syria. From the workmanship most of these tombs are probably of the Herodian times ; but whether the 15·5 inch cubit of the rude Hinnom tombs is earlier or later cannot be decided yet ; the presumption is that such a near and convenient site for tombs would be early occupied. We have at

least now a basis of accurate information as to the various cubits and their relative use, which will serve to start further studies.

So soon as the permission arrived Mr. Moore and I went to the governor, who was most cordial and willing to facilitate matters in every way. But further delays were due to the official who was deputed to receive everything that might be found on behalf of the Government. So that it was not till April 14 that I could at last begin work, only one week before Ramadan. I had already visited the various sites included in the area of the permission, but found that all but one were of Roman age and unimportant. The only promising place was Tell Hesy, in the Arab country, six miles from the village of Burer, where we had to settle to begin with. But as Umm Lakis had been supposed to be Lachish, and it was the nearest site to the village, three miles off, I determined to just examine it, partly in order to get a body of men together who could go off as far as Tell Hesy afterwards.

My expectations of Umm Lakis from the first view of it, were quite confirmed. We trenched about all over the ground down to the undisturbed native red clay; but there was only 6 or 8 feet of earth, and pottery of Roman age was continually found in it; while, most decisively, a worn coin of Maximian Hercules (circ. 300 A.D.) was found within 2 feet of native clay. On a hill to the north some walls were seen, but they proved to belong to a building with a large bath, probably a Roman villa. That Umm Lakis is the great historic city of Lachish is utterly impossible, after over three days' digging over the site. Khurbet 'Ajlân appeared far less promising than Umm Lakis; there is very little extent of artificial soil, very little pottery about it, and what there is shows Roman age; as it is all under crops I did not think it worth while to dig into it, after the insignificance of the much less unpromising site which we had already settled.

We then moved and established ourselves at Tell Hesy, which appeared to me to be a very important city of early date. In the absence of any inscriptions it might seem very risky to draw a conclusion as to the identification of a town; but we will first notice what reasons there are for believing this to be Lachish, and then we shall see how valuable the literary notices of its history become in understanding the site. Lachish was one of the five strongholds of the Amorites, with Jerusalem, Hebron, Jarmuth, and Eglon (Jos. x, 5). And it continued to be one of the strongest places in the country down to the invasions of Sennacherib and Nebuchadnezzar, to both of whom it was a special object of attack. It must, therefore, have had some natural advantages, and from various other notices (especially Eusebius) it certainly lay in the low country in this district. Now at Tell Hesy is the only spring for many miles around, a brackish brook trickles down from Tell Nejîleh, where in ancient times it was confined by a massive dam; and at Tell Hesy it is joined by a fine fresh spring, while the whole of the water is swallowed in the stony wady within a few hundred yards lower, and never reappears. It is certain then that Tell Hesy and subordinately Tell Nejileh must have been

positions of first-rate importance from the time of the earliest settlements. They would thus agree to the character of Lachish and Eglon. The history of Tell Hesy begins about 1500 B.C., and ends about 500 B.C.; while Tell Nejîleh, as far as can be seen on the surface, is of the same age, or ruined even earlier. The absolute point of date is the position in Tell Hesy—some way from the bottom of it—of the thin black Phœnician pottery which is known in Egyptian remains as belonging to about 1100 B.C. While the close of its history is fixed by the fragments of Greek pottery on the top of it, and the total absence of Seleucidan and Roman objects. There are then no sites in the country around so suited to the importance of Lachish and Eglon as these two Tells; and conversely there are no recorded places of such primary value as these must have been, except the two Amorite capitals of the low country, which we know to have been near together.

It will naturally be asked how the names of Umm Lakis and 'Ajlân come to be in places which are some miles from these tells, and are certainly not the cities of Lachish and Eglon. A conjecture may be tolerated that during the captivity the Bedawîn spread over the south country and seized these springs for their flocks; that the "residue of Israel" which returned were not strong enough in this outlying district to dispossess the occupiers,* and that the men of Lachish and the men of Eglon (*see* the local groups maintained in Neh. vii, 25-38) took up lands in sight of their old habitations, on the other side of the Wady Hesy, and gave them the old names. Such a process seems very likely; and the possibility of it must warn us against placing too much value on the position of a name alone. The name Umm Lakis might well be applied to a descendant of the ancient city; Umm Lakis being like Abu Daud in modern Arabic, meaning "his father is David," and so "its mother was Lachish. I will not venture to say whether there is an echo of the old 'Ajlân in the name Nejîleh, but the tell is not more particularly grassy than other places; nor will philologists perhaps allow it possible that the name of Lachish may have been formed from that of the Wady Hesy, the town of "Hesy," Le-hesy.

The actual remains of Tell Hesy consist of a mound which is formed of successive towns, one on the ruins of another, and an enclosure taking in an area to the south and west of it. This enclosure is nearly a quarter of a mile across in each direction, and is bounded by a clay rampart still seven feet high in parts, and in one place by a brick wall. This area of about 30 acres would suffice to take in a large quantity of cattle in case of a sudden invasion; and such was probably its purpose, as no buildings are found in it, and there is but little depth of soil. The city mound is about 200 feet square; its natural ground is 45 to 58 feet above the

* The feeble occupation of Lachish is shewn by the phrase "Lachish and the fields thereof" (Neh. xi. 30), while all the other towns occupied had villages dependent on them: this shows that there were not enough settlers to fill up the *Khurbets* all round Lachish.

tream in the wady below, and on that the mass of dust and ruins of brick walls rises 60 feet. The whole of the east side of the town is destroyed by the encroachments of the valley, which here makes a great bend that has enabled the winter torrents to eat away this side. But for this fact we should have been unable to reach anything much of the earlier ages here ; but in the section cut away in a steep slope above the wady, every period is equally exposed. We can thus see the succession of the walls of the town, and trace its history.

The earliest town here was of great strength and importance ; the lowest wall of all being 28 feet 8 inches thick of clay bricks, unburnt ; and over this are two successive patchings of later rebuilding, altogether 21 feet of height remaining. Such massive work was certainly not that of the oppressed Israelites during the time of the Judges ; it cannot be as late as the Kings, since the pottery of about 1100 B.C. is found above its level. It must therefore be the Amorite city ; and agrees with the account that "the cities are walled and very great" (Num. xiii, 28), "great and walled up to heaven" (Deut. i, 28), and also with the sculptures of the conquests of Ramessu II, at Karnah, where the Amorite cities are all massively fortified. So far as a scale of accumulation can be estimated, the foundation of the city wall would have been about 1500 B.C., and thus agrees to the time of the great Egyptian conquests of the land, beginning under Tahutmes I, at that date. The need of defence against such a well-organised foe, probably gave the great start to fortifying in Syria. On both outside and inside of this wall is a great quantity of burnt dust and ashes, with fragments of pottery ; and we can now exactly know the character of the Amorite pottery, and its peculiarities, which are quite different to those of other times or places.

The next period is marked by a stratum of 5 feet of dust and rolled stones out of the valley below, lying in confusion on the ruins of the great Amorite wall. These remains clearly show a barbaric period, when the inhabitants were not skilled either in brick-making or in fortifying, and when rude huts of the nearest materials were piled up, only to fall soon into ruin. This accords with what we glean as to the period of the Judges, and, coming immediately on the ruins of the Amorite city, the historical relation of these remains can hardly be doubted. Above this we meet a period of wall-building and fortifying, which goes on with intermissions and various destructions until the end of the history. The first of these walls is the most solid, being 13 feet thick, and this probably belongs to Rehoboam's fortification of Lachish (2 Chron. xi, 9) ; for, though David and Solomon doubtless did some building (2 Chron. viii, 2–6), yet probably this was more in the outlying parts of the Kingdom, and not so near home, where the strength of the inhabitants was sufficient protection. Rehoboam, on the contrary, found himself with a shattered country, which needed consolidating throughout ; and his fortifications of the inner circuit of towns show how little David and Solomon had thought it needful to attend to them. Probably to this

fortifying of Rehoboam we must attribute the wall which I have traced along the north and west of the town, forming a tower at the north-west corner. But to trace the connection of walls in one part with another is a difficult task, as they need to be cleared all along, and all the rebuildings and patchings tracked out—a most tedious affair. The four rebuildings which may be traced on the east face section must belong to some of the fortifying mentioned as having been done under Asa, Jehoshaphat, Uzziah, Jotham, and Manasseh. That the main building here does not belong to later times than Nebuchadnezzar's destruction is shown by the scanty remains of post-exilic times found on the very top of the mound, a Persian coin and pieces of Greek pottery of the fifth century.

On the south side a different character of walls is found; one of the later being a massive brick wall 25 feet thick, and still of a considerable height. Probably this belongs to Manasseh's work, about 650 B.C. This was built over a great *glacis* slope, formed of blocks of stone faced with plaster, which can be traced for forty feet height of slope; perhaps this may be attributed to the hasty defences by Hezekiah at the time of Sennacherib's invasion in 713 B.C. A flight of steps of rather rough stones led up to an ascent of the *glacis*, which has now perished in the valley, and there is the gateway of a building at the foot of the steps, the rest of which has likewise been washed away. As this building may be attributed to about 700 B.C. or earlier, its character is important in the question of stone-working. There is the system of drafted stones, with a smooth edge, and a rough lump on the middle of the face; but there is no trace of the "claw tool," or rather comb-pick, as it may be more intelligibly described. On the masonry at Jerusalem this is a constant feature, and we will notice later on the importance of this matter. This *glacis* slope overlies the earth, which is piled 10 feet deep around a large building, the line of which I have traced on the east side. This building is 85 feet long, with walls of clay brick, over 4 feet thick. It must be considerably earlier than the *glacis* to allow of ten feet of accumulation; and as the *glacis* cannot be likely to be earlier than Hezekiah, the building can hardly be of Ahaz; but it rather belongs to the long and flourishing time of Uzziah. Indeed, on a regular scale of accumulation of deposits, we should need to date it back to Jehoash; but we can hardly be too early in dating it to 800 B.C. Then ten feet more below this is another clay-brick building, which we should accordingly have to date back to 900 B.C. or earlier—perhaps 1000 B.C. It has, moreover, been ruined and burnt, and then reconstructed out of the old materials, very rudely. Though of clay brick, it had doorways of fine, white limestone, and some precious slabs of these yet remain, turned upside down in the reconstruction. These show us a curious form of decoration by a shallow pilaster, with very sloping side, resting on a low cushion base, and with a volute at the top. We are here face to face at last with work of the earlier Jewish kings, probably executed by the same school of masons who built and adorned the temple of Solomon. We see decoration which

we must suppose to be closely akin to that of Solomon's time—if not, indeed, as early as that itself. We learn that the Ionic volute, which the Greeks borrowed from Asia, goes back to the tenth century in Asiatic art; and we can hardly fail to see its origin from a ram's horn, thus leading us to a pointed suggestion as to the form of the "horns of the altar." Looking downwards from this, to test the scale of its age, we see the oldest Amorite level, of about 1500 B.C., 32 feet below it, a distance which would require us to date it to 1000 rather than 900 B.C., and which shews that the age is under, rather than over, estimated in the successive steps described above. The truth most likely is that this decoration is of Solomon's own time. Beside these wall-slabs there are fragments of a cavetto moulding from the door lintels, exactly like that of the early Jewish monolith shrine at Siloam. Three of these pilasters have been found, and though not thought worth removal by the Turkish officials, not one of them can come to England. I have taken casts and photographs of them, and carefully reburied them in known spots. Beside these, one of the slabs had a graffito on it representing a lion (?) walking; and as it was upside down it must have been scratched in the time of the first building. Unfortunately the remainder of this building is beneath 30 feet of earth, and the small prospect of there being anything else of importance in it, makes it scarcely worth while to undertake such a weighty clearance. No small objects have been found in the ashes so far.

The great scarcity of small antiquities, and the rarity of any regular stonework, makes this excavation seem barren after those in Egypt. Yet every fragment bearing on the history of art in Palestine is of great value from its very rarity, and the present results just described fill a wide space in our architectural knowledge which has hitherto been a blank. Another matter of importance in itself, and of inestimable value for future exploration, is the fixing of a scale of dated pottery. Poor as Tell Hesy is in some respects, it is full of potsherds; and the chance of such a grand section as that of the east face from top to bottom, gives us at one stroke a series of all the varieties of pottery over a thousand years. We now know for certain the characteristics of Amorite pottery, of earlier Jewish and of later Jewish influenced by Greek trade, and we can trace the importation and the influence of Phœnician pottery. In future all the tells and ruins of the country will at once reveal their age by the potsherds which cover them.

The methods of stoneworking are another great key to the age of work. In the Haram wall at Jerusalem all the stones are dressed with the comb-pick (or "claw-tool"), down to the very base as Professor Lewis states. This tool in Egypt is characteristic of Greek work, and it was used in pre-Persian work in Greece, pointing to its being of Greek introduction. Now in the masonry of the period of the kings here we have a strong test of the question; and in no part either of the gateway, steps, or pilaster slabs is any traces of comb-pick work to be seen. The evidence, therefore, is strong that this tool is a sign of Herodian and later ages; and we must

ascribe the whole of the Haram wall to Herod. This also strengthens the view that Ramet-el-Khallil is an early building, as no trace of comb-picking is seen on the massive blocks there, but only on the later relining of the building.[1]

W. M. Flinders Petrie.

THE WORK AT TELL EL HESY, AS SEEN BY AN AMERICAN VISITOR.

It is with pleasure that I accept your invitation to send you an account of my visit with Mr. W. M. Flinders Petrie. What you want, I am sure is not any archæological dissertation, or any account of the "finds;" but rather a description of some of the things which would interest one new to the country, and new to the work of excavating.

The trip from Jaffa down the coast, past Ashdod and Ascalon, towards Gaza, was a memorable one. The hedges of prickly pear in full bloom, sometimes twelve feet high and twelve feet deep, which surrounded the village, and the date-palms which lovingly moved their beautiful plumes over the mud huts and queer conical-shaped ovens, made Philistia appear to me more beautiful than any other part of Palestine.

These level sandy roads, though, impress one that the "way of the Philistines" would have been just fitted for the chariots of Egypt, and the worst road in the world for a band of slaves to take when attempting to escape from the Pharaoh.

What could be more romantic than a journey over this historic "highway," sleeping in a khan at night, having a box for a bed and the sky for a roof, and passing scarcely a town that did not have some granite shafts or marble capitals—sometimes as richly carved as those of Baalbek—built into its mud walls or used as a donkey trough at the village well?

There was constant evidence that I was walking over ancient soil. Not only was the summit of every mound that I visited covered with broken pottery, but at Ascalon I was offered many old coins and an image of a goddess, which I suppose to be Ashtoreth; at Umm Lakis, a *fellah* tried to sell me a Phœnician *menhir;* and at El Kustneh I descried a raised platform surrounded by mats, and a heap of stones and a lamp, which seemed to hint at the perpetuation of the ancient Canaanitish worship even to this day.

Charming as was all this, however, I was glad when on the morning of the 8th May, I caught sight of the end of my journey—a gashed and broken tell lying by the water-brook like some hurt creature of the

[1] Full detailed reports of the results of these excavations, with plates plans, and sections, will be published later on. Portions of the pottery and other antiquities which have been brought home will be exhibited at Oxford Mansions in September, together with Mr. Flinders Petrie's Egyptian discoveries of the past season.

geologic ages fallen in its dying agonies. In the distance this fancy was encouraged, because of the many little objects which could be seen crawling in and out of the fresh wounds. On approaching nearer these moving objects took shape as Arabs, who seemed to be mangling the poor carcase in a most reckless way, until the discovery was made that every stroke of the pick was directed "from above," and that every puncture and furrow and tunnel had some definite object.

These Arab picksmen looked picturesque enough in their single garment, and their wives no less so, as, unencumbered with very little clothing excepting their necklaces and armlets, they carried away upon their heads in ragged native baskets, and pitched over the cliff the results of their husbands' manly toil. The cliff was formed by Dame Nature, who, in her interest for Palestine explorations, ages ago sent a torrent tumbling along this wady, and sliced the tell from the top to bottom, much better than any modern excavator could have done it; thus leaving a clean face for accurate chronological investigation of the various eras of the mound's occupation. I am not sure whether this tell got its name, "The Mound of the Water Pit," from the hollows in the bed of the little creek which yet runs through the wady, in which water can be found in the summer after the stream is dried up everywhere else, or whether it comes from the spring of good sweet water which trickles out of the rocks at the base of the tell.

I was in the camp several days before I found this spring, and delighted enough I was to find it, for it was the first draught of cool water that I had been able to get for a week. It was a novel sight to sit on the cliff in the evening and watch the Bedawîn girls crowding about this spring, each seeking to be the first to fill her black jars and lift them into the wicker baskets hung on each side of her donkey's back.

The Bedawîn were plenty. At any time one might count half-a-dozen camps in sight, each camp containing from four to forty tents. All the details of their daily life became very familiar to us. Their fields of grain were all around us. In one direction might be seen a large ungainly camel dragging the little wooden plough; in another, the shepherd leading his sheep and calling back the strays with his keen quivering whistle; in another, the harvesters reaping the barley crop, or rather pulling it up, for even those who had sickles did not pretend to cut the stalks of grain with them, but only used them to collect more comfortably the handfuls, which they then extracted by the roots!

Yet we may be glad that they are willing to "farm it" even as much as they do. For untold centuries these "children of the East" were accustomed to live in the desert, and then just about harvest-time they would come up "like grasshoppers" as far as Gaza, and pitching their black tents, help themselves. (Judges vi).

In Gideon's day it was a great encouragement to the Hebrew captain to hear one of these thieves tell his comrade that he had just dreamed that one of the stolen barley loaves had grown astonishingly large,

and rolled down the hill against his tent and overturned it. Having tried for some time to live on native barley bread, I can understand how, after a heavy supper, one might easily dream that these loaves could be used effectively as cannon balls, or as ammunition for a catapult.

But that cannot be said of the Arabic bread with which I was served at Tell el Hesy. I never relished a *table d'hôte* better than I did there. We were nomads, and had the pleasure of a perpetual picnic. Tinned meats, and the preserves for which we longed as boys, were luxuries which we enjoyed at every meal—and to eat out of the can saved washing a dish. We solved the problem of living comfortably without being everlastingly tormented with the presence of His Highness, the *chef de cuisine*.

Our most elaborate repast only required us to wash two forks, three spoons, two cups, two plates, and a dish-pan! That only took three minutes, and who wanted anything more? Sometimes I ate with a case knife, but generally used my pen-knife when it was my day to wash the dishes. As for a bread-plate, that is all nonsense—what was the table made for?

The only thing that disappointed me in Mr. Petrie was his luxurious tastes. Actually, he insisted on eating every day on a mahogany table, and would always use solid silver spoons with his dessert. I always looked with some awe at that table after I learned that it was mahogany. I examined the boxes that I laid on every night, hoping that I could report that I slept nightly on a sandal-wood bedstead; but unfortunately the cracker factory that sent them out were not putting on much style just then. After all, it might have sounded almost as well if I had only thought to say that my bedroom furniture was made of *pinus resinosa*. That is the way I shall report it in the United States. All the bedroom furnishings we had were those three boxes and a tin basin. One thing I know, I got good sleep every night.

One evening we were greatly puzzled to know what to do. Some aristocratic visitors came all the way from Egypt to see us. At any rate, the last we had seen of them had been in Egypt until they suddenly rode in upon us. One was a Prussian nobleman, the Count d'Hulst, and the other an American nobleman, Dr. Goddard, of the Egyptian Exploration Fund. At first I thought the mahogany table would have to be used as a bed, but presently I found that our visitors had brought a tent with them, and everything with which to make themselves comfortable.

To be sure they had to sleep on blankets thrown on the ground instead of reposing on a couch of sandal-wood or *pinus resinosa*, but I only went so far as to pity them. I did not propose to give up my privileges as a prior guest, even to such distinguished gentlemen.

What an evening we had together, though! As we sipped our tea and drank each others' health in delicious draughts of raspberry vinegar, and talked over all our mutual acquaintances and their virtues, and

settled all Egyptian affairs, archæological and political, I am thinking that no more contented group of mortals could have been found inside the continent of Asia.

That is saying a good deal too, for there are few such happy-go-lucky sort of people to be found in England or America as are these Arabs. They have nothing, and they need nothing, and they want nothing. To have a turban and a shirt, and to be able to lie down during the greater part of the day in the shade of a great rock, in a weary land, is the *summum bonum*. What a fool the pushing, struggling, perspiring European appears to him! Why get excited? Why work? Will not Allah provide what is best? If you can afford a knife and a gun you are well to do. If you have a goat and a camel, and a wife or two to take care of them, you are rich. Take thy comfort, thou son of a day, and enjoy the smell of the ground while thy nose is young!

That is good Bedawîn philosophy. Nevertheless, while they seem to be convinced that Allah will take care of them without work, they seem to think that it would be tempting providence not to steal. This, together with their warlike disposition, makes them anything but agreeable neighbours. Every little while the news would come to us of some traveller who had been waylaid and kept for ransom, or who had been robbed and beaten, and left half dead in the desert; and one day the noise of a battle between two hostile tribes disturbed the camp all day long. It was reported afterwards that eight men were killed in the fight. A few days before I arrived a number of leading sheikhs had been arrested and sent under a heavy escort to Jerusalem. The fact that our camp was never molested was due, I think, much more largely to Mr. Petrie's exceptional skill in managing the Arabs than to the fact of the *Effendi* being on the ground.

He was very just in his dealings with them, and very careful of their rights. An illustrative case is seen in his treatment of the barley-patch on the top and sides of the tell. The Arabs would race over this according to the primitive law that one "can come into the standing corn" and "pluck the ears," providing only he puts no sickle in the grain (Deut. xxiii), but the director of affairs would not put so much as his foot over the path.

That leads me to say that the best thing I saw at Tell el Hesy was Mr. Petrie himself. All day long he would go from group to group of his workmen, critically examining the colour and character of the clay and any scraps of pottery that had been found. It was a constant surprise to me, as we went prospecting together, to see how accurately he could determine, even at a distance, the meaning of some peculiar formation. It was an equal surprise to notice how swiftly and certainly he would expose any of the impostures which are so frequently attempted by the *fellaheen*. I think he scarcely needs to do more than walk over a mound covered with pottery to tell the age of the latest town to be found underneath, while, because of his long experience and minute observation, from a chip of tool or scrap of vase

he can reconstruct the original as infallibly as a zoologist can draw the picture of an animal upon being shown a bit of his skeleton.

May he stick his spade deep into Philistia and bring up great spoil!

CAMDEN COBERN.

Detroit, Michigan,
June 16th, 1890.

THE DEAD SEA VISIBLE FROM JERUSALEM.

JOSEPHUS ("Wars" v, iv, 3) seems to imply that the Mediterranean was visible from the Tower Psephinus. Some, however, take his words to refer to the Dead Sea. The Russian buildings can hardly be high enough to command a view of the former, so that as to that sea one suspects Josephus of inaccuracy. In 1875, my brother and I believed we saw the Dead Sea from the battlements of the (so-called) Zion Gate. In my diary for April 12th, I find noted, "We next entered by the Zion Gate, climbed the tower from which we had a most glorious view of the Moab Mountains (with just two strips of *the Dead Sea visible*), through the most pellucid atmosphere, as the slanting rays of the sun shone upon the country from behind us."

After searching many books, questioning a native of Jerusalem, as well as an English resident of 20 years, and others, I find now no corroboration from them of my belief, but rather the suggestion that we mistook the haze for the sea. One is reluctant, however, to accept this explanation as final.

W. F. BIRCH.

THE DEAD SEA VISIBLE FROM JERUSALEM.

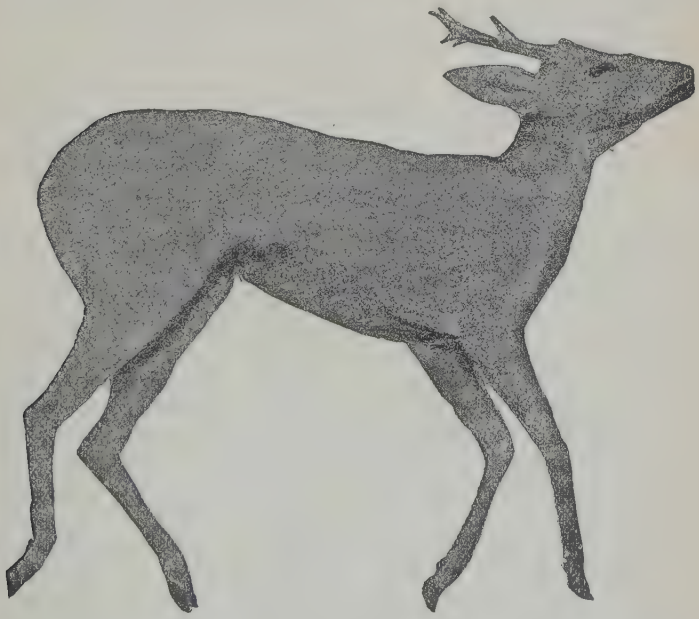
THE Dead Sea *can* be seen from the roof of the London Jews' Society's Boys' School, and also from that of Christ Church, but only at a certain hour of the day during the summer months. I have often noticed it about 8 a.m., shining like a small speck of molten silver through a small gap amongst the bare hills towards Mar Saba. This was all that, *till a few years ago*, could be seen of it. However, since the erection of the large church of St. Salvador in the Franciscan convent in the north-west part of the city, several large portions of it may be seen at all hours of the day (unless the weather be hazy), if one will take the trouble of climbing into the clock-tower.

J. E. HANAUER.

THE ROEBUCK IN PALESTINE.

In the "Fauna and Flora" Canon Tristram notes the Roebuck among the animals of Palestine, but does not appeal to a specimen of his own collection. He says it is found in the woods of Carmel, but that Sheikh Iskandar is its most southerly station. He also states that it is called the Yahhmûr, يَحْمُور by the natives.

Major Conder, in "Tent Work in Palestine," i, 173, says that he obtained a specimen from the charcoal burners of Carmel, and sent the bones and skin to the museum at Cambridge. He also says that



it is called Yahhmûr by the natives, and that a district of Carmel is known as "the Yahhmûr," probably from the former abundance of this animal.

The Yahhmûr of the Hebrew (Deut. xiv, 5) is translated "fallow-deer," but this is, in view of the above testimony, a mistake. The true fallow-deer (the "hart" of Ps. xlii, 1) is the Iyyal, which is not now often found south of Cassius and Amanus, where it is still hunted. Tristram says that it has been found along the Litâny and north-west of Tabor.

Last summer, Rev. W. K. Eddy, of Sidon, procured a female of the Roebuck species near Alma, in Northern Galilee. Unfortunately it was skinned only with a view to making a mat of the pelt, and so no scientific observations could be made. The bones were not preserved.

A few days since the same gentleman procured for me from natives a full-grown male, of which the accompanying is a sketch, made from the carcase, lying in an attitude which it assumed with ease when stretched out and left to replace itself. The point of view of the artist was 8 feet off from the feet and 4 feet above the animal. This gives a little fore-shortening of the neck, otherwise the proportions are well preserved.

The natives of the region about Qâna and 'Alma call this species the Wa'l وَعِل. The term Wa'l, however, belongs properly to the wild goat or Syrian Ibex (*Caper Beden*).

The measurements are as follows :—

	ft.	in.
Height at shoulder, approximately	2	4
„ rump „	2	6
Length (stretched out) from tip of nose to end of rump	3	10
„ „ „ „ hind foot	5	4
„ „ „ „ right horn....	1	$2\frac{3}{4}$
„ „ „ „ left horn	1	$3\frac{3}{4}$
The eye was almond shaped, with point forward :		
Inside length	0	$1\frac{1}{16}$
„ breadth	0	$0\frac{1}{2}$

A peculiarity is that this animal had no tail. The rump was rounded. The coccyx, about 2 inches long, made no external projection.

The colour was grey, with a reddish-brown shade toward the posterior part of the rump, and white between the thighs and on the belly.

The horns are three-branched, and, as depicted in the drawing, on a straight line with the front of the face, which is quite flat.

If, as suggested by Captain Conder, this species furnished the venison, which formed part of the daily menu of Solomon, it must have been abundant in the age of that monarch. It has now become quite rare, and, so far as known to the writer, no recent specimen has been minutely described and figured. The present notes fix its identity beyond a question.

George E. Post.

Beirût, March 8th, 1890.

THE ROEBUCK.

THE existence of the roebuck in Palestine was, I believe, unknown before a specimen was brought to me at Haifa in 1872. Dr. Tristram did not know of it apparently when he published his "Natural History of the Bible," in 1868, and he would, no doubt, acknowledge the source of his notice in the "Memoirs." The specimen taken to Cambridge by Mr. C. F. T. Drake in 1873 was pronounced to be the same as the English roebuck. I have also noticed its existence in the woods of Mount Gilead, where it appears to be called *Hamûr* instead of *Yahhmûr* the name which I ascertained on Carmel.

C. R. C.

MASHITA.

I HAVE not Major Conder's last book by me at the time of writing but I think he states in it that the question whether the conjecture which assigns the building at Mashita to Chosroes is right, must depend upon the deciphering of the inscriptions which may be found there. My wife and I have visited Mashita twice; once in 1888, and again in April of this year (1890); and on both occasions I made diligent search without being able to discern any inscription whatever, except the "Wusn" marks of the Arabs. My wife, on the occasion of our last visit, took thirteen photographs, and if these turn out well on being developed at home, I will send you copies. Some of the detail of ornamentation (which seems to me very Persian in style) is exceedingly fine. I have no description of the ruin by me, and may be merely repeating what is well known, when I give the following particulars, but the place is so seldom visited that I will venture. The main erection and enclosure are built to the cardinal points of the compass; the sculptured front of the latter and the gateway being to the south. The appearance of the ruin fully supports the theory that the buildings were never finished, as there is nothing like the requisite amount of material on the spot for completion of the work, and no building near in which the material could have been used up. The nearest building is the Khân Zitza, on the Haj road, of which, if I remember right, there is some account in Mr. Doughty's book. But this place was too far for me to visit conveniently. There is no other building nearer than Madeba (about four hours' journey), where the houses are all recently built out of cut stones found at that spot, and, therefore, the material cannot have been used up there.

The outside of the west and inside side of the east walls of the enclosure at Mashita are much worn and decayed, whilst the inside of the west and outside of the east walls are fresh looking. This is

no doubt due to the west gales and rains. I think that the ground round the building has been somewhat raised, as the beautifully ornamented string course in the sculptured south front is very near the surface of the soil. And on the east side of the gateway I could see, through an aperture, to a depth of three or four feet below ground that the wall was continued downwards in regular courses of stone. Perhaps this particular spot had been excavated as a tomb, as I saw a human skull and some bones there.

The people of Madeba and the Adwân Bedawîn call the place "Umshetta," not "Mashita." It is situated in the country of the Beni Sokr, and to be quite safe one should take an escort of that tribe from Madeba. But in the spring the Beni Sokr move a long way to the eastward, and on neither occasion of our visits did we see anything of them. In 1888 we had four men of the Adwân with us, who, however, made considerable objection to going, and observed great precautions—not allowing us to stay more than about three-quarters of an hour. On our last visit we had two Adwân and four men of Madeba with us, and were allowed to stay fully two hours. The Adwân Sheikh told us that, except an American gentleman whom they conducted at the time of the American exploration of the Dead Sea, we were the only people whom his tribe had escorted to the place.

GRAY HILL.

Jerusalem, 5th May, 1890.

METEOROLOGICAL OBSERVATIONS.

SARONA, 1888.

THE numbers in column 1 of this table show the highest reading of the barometer in each month; the maximum was 30·272 ins. in December. In the years 1880, 1881, 1884, and 1887 the maximum was in January, in 1882 in February, and in 1883, 1885, and 1886 in December, as in this year; the maximum, therefore, has always been in the winter months. The highest reading in the nine years was 30·285 ins. in 1887. The mean of the eight preceding highest pressures was 30·217 ins.

In column 2, the lowest reading in each month is shown; the minimum for the year was 29·529 ins. in February. In the year 1883 the minimum was in January, in 1881 in February, as in this year, in 1880, 1884, 1885, and 1886 in April, and in 1882 in July. The lowest readings in each year have taken place in the months from January to July. The lowest reading in the nine years was 29·442 ins. in 1887. The mean of the eight preceding lowest pressures was 29·507 ins.

The range of barometeric readings in the year was 0·743 inch; in the eight preceding years the ranges were 0·780 inch, 0·711 inch, 0·704 inch 0·579 inch, 0·757 inch, 0·680 inch, 0·621 inch, and 0·843 inch respectively. The mean for the eight years was 0·709 inch.

The numbers in the 3rd column show the range of reading in each month; the smallest was 0·168 inch in August; in 1883 the smallest was in June, in 1882 and 1886 in August as in this year, and in 1880, 1881, 1884, 1885, and 1887 in October. The mean of the preceding smallest monthly ranges was 0·178 inch. The largest monthly range was 0·725 inch in December; in the years 1883, 1884, and 1887 the largest was in January, in 1882 in February, in 1881 and 1886 in March, and in 1880 in April.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the greatest, 29·977 ins., was in December. In the years 1880, 1881, 1882, and 1884 the greatest was in January, in 1883 and 1887 in February, and in 1885 and 1886 in December as in this year. The highest mean monthly reading in the nine years was 30·060 ins. in January, 1882.

The smallest mean monthly reading was 29·672 ins. in July; the smallest reading in any month in the nine years was 29·653 ins. in August, 1887, while that in August, 1885, was nearly as small, being 29·657 ins.; in the years 1880, 1882, 1883, and 1886, the smallest was in July as in this year, and in 1881, 1884, 1885, and 1887 in August.

The highest temperature of the air in each month is shown in column 5; the highest in the year was 105° in October, the next in order was 98° in March, and 97° in May. The first day in the year the temperature reached 90° was March 5th, and on six other days in this month the temperature reached or exceeded 90°: in April on one day, the 1st, when the temperature was 91°; in May on one day, on the 26th, when it was 97°; in July on ten days; in August on seven days; in September on four days; and in October the temperature reached or exceeded 90° on nine days; the highest in the year, viz., 105°, took place on the 19th, and on the 17th and 18th of this month the temperature reached 102° and 104° respectively; therefore, the temperature reached or exceeded 90° on 39 days during the year. In the preceding eight years the temperature reached or exceeded 90° on 36, 27, 8, 16, 14, 24, 16, and 25 days respectively. In the eight preceding years the highest temperatures were 103°, 106°, 93°, 106°, 100°, 103°, 112°, and 100° respectively.

The numbers in column 6 show the lowest temperature of the air in each month. The lowest in the year was 37°·0 on January 11th, and on the 12th of January the temperature was as low as 39°·0, and these were the only two nights in the year that the temperature was below 40°. In the preceding eight years, viz., 1880, 1881, 1882, 1883, 1884, 1885, 1886, and 1887 the temperature was below 40° on 13, 2, 13, 2, 9, 3, 3, and 15 nights respectively. In the preceding eight years the lowest temperatures were 32°, 39°, 34°, 35°, 32°, 38°, 37°, and 32°·5 respectively.

The yearly range of temperature was 68°·0; in the eight preceding years, viz., 1880, 1881, 1882, 1883, 1884, 1885, 1886, and 1887, the yearly ranges were 71°, 67°, 59°, 71°, 68°, 65°, 75°, and 67°·5 respectively. The mean of the eight preceding yearly ranges was 67°·9.

The range of temperature of each month is shown in column 7, and these numbers vary from 26° in August, to 58° in March. In the year 1880 these numbers varied from 25° in August to 53° in both April and May ; in 1881 from 29° in both July and September to 51° in May ; in 1882 from 25° in August to 47° in November ; in 1883 from 25° in July to 62° in March ; in 1884 from 24° in February to 51° in April ; in 1885 from 22° in July to 52° in March ; in 1886 from 26° in August to 55° in June ; and in 1887 from 27° in July to 54° in April.

The mean of all the highest by day, of the lowest by night, and of the average daily ranges of temperature are shown in columns 8, 9, and 10 respectively. Of the high day temperature the lowest, 61°·7, is in January. In the years 1884, 1885, 1886, and 1887, the lowest was in January as in this year ; in 1881, 1882, and 1883 in February, and in 1880 in December. The highest, 88°·5, is in July, whilst that in August is of nearly the same value, viz., 88°·4. In the year 1880, the highest was in May ; in 1881, 1883, 1884, 1885, 1886, and 1887 in August, and in 1882 in September. Of the low night temperature, the coldest, 44°·9, was in January ; in the years 1880, 1882, and 1884 the coldest was in January as in this year ; in 1883, 1885, and 1887 in February, and in 1881 and 1886 in December. The warmest, 70°·3, was in August ; in the year 1885 the warmest was in July, and in the years 1880, 1881, 1882, 1883, 1884, 1886, and 1887, the warmest was in August as in this year. The average daily range of temperature is shown in column 10 ; the smallest, 15°·6, is in December ; in the years 1880, 1883, 1885, 1886, and 1887, the smallest was in January, and in 1881, 1882, and 1884, in February. The greatest range of temperature in any month, 24°·4, was in March ; in the years 1884 and 1887 the greatest was in April, in 1880 and 1885 in May, in 1881 in June, in 1883 in September, and in 1882 and 1886 in October.

In column 11, the mean temperature of the air is shown, as found from observations of the maximum and minimum thermometers only. The month of the lowest temperature, 53°·3, was in January. In the years 1880, 1884, 1885, 1886, and 1887, the lowest was in January, as in this year ; in 1881 and 1882, in February ; and in 1883, in December. That of the highest, 79°·4, was in August, as in the eight preceding years. The mean temperature of the air for the year was 67°·7, and of the eight preceding years, viz., 1880, 1881, 1882, 1883, 1884, 1885, 1886, and 1887, were 66°·4, 66°·7, 65°·5, 65°·7, 65°·7, 65°·9, 66°·8, and 66°·5 respectively.

The numbers in columns 12 and 13 are the monthly means of a dry and wet-bulb thermometer, taken daily at 9 a.m. In column 14 the monthly temperature of the dew-point, or that temperature at which dew would have been deposited, is shown. The elastic force of vapour is shown in column 15. In column 16 the water present in a cubic foot of air is shown ; in January it was as small as 3½ grains, and in August as large as 8 grains ; in column 17 the additional weight required for saturation is shown. The numbers in column 18 show the degree of

humidity, saturation being considered 100; the smallest number indicating the dryest month is 54 in March, and the largest, 83, indicating the wettest month, was in December. The weight of a cubic foot of air under its mean pressure, temperature, and humidity, at 9 a.m., is shown in column 19.

The most prevalent wind in January was S., and the least prevalent winds were N. and W. In February the most prevalent were S.W. and S., and the least were N.E. and N.W. In March the most prevalent were S. and S.W., and the least were N., E., and N.W. In April the most prevalent were W. and S.W., and the least were N. and N.E. In May the most prevalent were N.W., W., and S.W., and the least were N.E., S.E., and S. In June, July, and August the most prevalent were W. and S.W., and the least were N., N.E., E., S.E., and S. In September the most prevalent were S.W. and N.W., and the least were N.E., E., and S.E. In October the most prevalent were S.E. and N.W., and the least was N.E.; and in November and December the most prevalent was S., and the least were N. and N.W. The most prevalent wind for the year was S.W., which occurred on 86 different days in the year, and the least prevalent wind was N., which occurred on only six times during the year.

The numbers in column 29 show the mean amount of cloud at 9 a.m. The month with the smallest is June, and the largest February. Of the cumulus, or fine weather cloud, there were 106 instances in the year, of which 24 were in September, 16 in July, and 15 in June. Of the nimbus, or rain cloud, there were 63 instances, of which 15 were in December and 10 in both January and November, and only 5 from May to September. Of the cirrus there were 64 instances; of the cirro-cumulus there were 23 instances; of the stratus, 14 instances; of the cirro-stratus, 6 instances; and 90 instances of cloudless skies, of which 15 were in August, and 13 in both June and July.

The largest fall of rain for the month in the year was 11·53 ins., in December, of which 2·95 ins. fell on the 18th, 1·95 inch on the 11th, 1·10 inch on the 12th, and 1·05 inch on the 16th. The next largest fall for the month was 6·27 ins. in November, of which 2·10 ins. fell on the 13th. No rain fell from the 4th of June till the 1st of October, making a period of 118 consecutive days without rain. In 1880 there were 168 consecutive days without rain; in 1881, 189 consecutive days; in 1882 there were two periods of 76 and 70 consecutive days without rain; in 1883, 167 consecutive days; in 1884, 118 consecutive days; in 1885, 115 consecutive days; in 1886, 171 consecutive days; and in 1887 there were two periods of 132 and 63 consecutive days without rain. The fall of rain for the year was 28·84 ins., being 0·16 inch, 11·35 ins., 6·75 ins., 10·11 ins., 8·78 ins., 8·75 ins., and 11·78 ins., larger than in 1880, 1881, 1882, 1884, 1885, 1886, and 1887 respectively; and 1·22 inch smaller than in 1883; therefore it was greater than any of the falls of the eight preceding years, with the exception of 1883, when the fall was 30·06 inches. The number of days on which rain fell was

62. In the preceding eight years, viz., 1880, 1881, 1882, 1883, 1884; 1885, 1886, and 1887, rain fell on 66, 48, 62, 71, 65, 63, 66, and 43 days respectively.

James Glaisher.

Errata.

In consequence of the reading of the barometer at Sarona on April 23rd, 1887, as found by comparison with the reading at Jerusalem on the same day, being too low by half an inch, the following corrections in the *Quarterly Statement* for April, 1890, are necessary :—

					ins.		ins.
In general table opposite page 112, col.	2,	April,	for		29·145	read	29·522.
„	„	„	3,	„	0·848	„	0·471.
„	„	„	4,	„	29·765	„	29·781.
„	„	„	2,	Means for	29·531	„	29·662.
„	„	„	3,	„	0·392	„	0·364.
„	„	„	4,	„	29·821	„	29·822.

				ins.		ins.
On page 112,	10th	line from top,	for	29·145	read	29·442.
„	16th	„	„	1·140	„	0·843.
„	7th	„	bottom for	0·848	„	0·843.
„	„	„	„	April	„	January.

I.

THE SITE OF CAPERNAUM.

In his "Rob Roy on the Jordan" (7th edition, pp. 344-351), the author has conclusively shown that Tell Hûm is too near the place of embarkation after the Feeding of the Five Thousand, and not sufficiently near "the land of Gennesaret;" and that Khân Minia, or some other spot on the Plain of Gennesaret, corresponds to St. John vi, 17-21, and St. Mark vi, 53.

Last spring I explored the rocky promontory to the N.E. of Khân Minîa, so far as the rank thistles (often rising far above one's head) and thorns would allow. On the highest part, about 242 feet above the lake, are the remains of a fortification—possibly the station of the Roman Centurion (St. Matthew viii, 5),—and here and there traces of buildings, but *everywhere* I found broken pottery, showing that there was formerly a large population dwelling on this rock.

I am disposed to consider this to be the site of Capernaum rather than (or perhaps in addition to) the ruins to the south of the Khân. At the foot of the rock is the copious fountain 'Ain et-Tîn.

If this be so, then it must have occupied by far the most prominent position of any city on the Sea of Galilee, and would account for the remarkable expression in St. Matthew xi, 13, "And thou, Capernaum, which art exalted unto heaven, shalt be brought down to hell!"

The ruins of the Khân at the junction of the roads from Cæsarea, Jerusalem, and Peræa with the great Roman road leading north to Damascus, probably mark the very spot where Matthew sat "at the receipt of custom;" and the outlying rocks at the foot of the cliff, to this day the favourite resort of fish, indicate the spot where Peter would naturally go to "cast his hook." (St. Matthew xvii, 27.)

The only difficulty in this identification of the Site of Capernaum is the statement of Josephus, that the Plain of Gennesaret is watered by a fertile fountain, in which is found the *Coracinus*, or cat-fish; "the people of the country call it Capharnaum." Canon Tristram has argued, and with great probability, that he refers to the Fountain 'Ain el Mudauwerah, about $2\frac{1}{4}$ miles from Khân Minîa, in which that fish abounds (as I can also testify), but fails to show that there are any ruins in its neighbourhood which would answer to such an important city as Capernaum.

This identification, though conclusive against Tell Hûm, has far less force against Khân Minîa, as the fountain may have been named after the nearest city of any note. According to the fishermen with whom "Rob Roy" conversed the *Coracinus* is also found at 'Ain et-Tîn, close to Khân Minîa, which may have been used to irrigate a part at least of the plain, though if Josephus used the word διαρδεται accurately, I must admit that this fountain fails to meet its requirements.

I confess I cannot agree with the laboured theory which would make 'Ain Tâbghah the fountain which waters the plain of Gennesaret.[1] For it would be a work of supererogation to bring water at a great cost round the shoulder of a hard rocky promontory to irrigate what was already one of the best watered plains in Palestine. Four considerable streams run through it; Tristram calls it "the marshy plain."

Nor would an aqueduct be needed for drinking water, for no one would prefer the hot and brackish water of 'Ain Tâbghah to the cooler and sweeter water of 'Ain et-Tîn which was close at hand. I very much doubt if this cutting in the rock, now used as a pathway, is an aqueduct at all. Our party were unanimous in holding it to be of considerably higher level than 'Ain Tâbghah. The photograph, No. 59 of the Palestine Exploration Fund gives a good idea of its height above the plain. We had unfortunately no level with us, but the pathway seemed to descend

[1] We could find no *Coracinus* in this fountain, and it is difficult to see how it could get there from the lake.

on either side, and there were no traces of an aqueduct being continued beyond the cutting. I should rather think that this so-called aqueduct was of old neither more nor less than it is now, a portion of the paved road from 'Ain Tâbghah to Khân Minîa, cut deep into the rock at this point to avoid the inconvenience and danger of the natural surface of this shoulder of rock which here slopes down to a precipice; "resembling more the great rock-cutting of the Roman road at Abila, than any of the rock-cut aqueducts of the country." (Conder, "Tent Work," ii, 185.)

I picked up tessaræ in the ploughed fields between 'Ain Tâbghah (the probable site of Bethsaida) and the wooden house just built by German settlers in the middle of the little bay. The inmates told me they had found several while digging their garden.

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II

THE CAVE OF ADULLAM.

May I put in a plea for the traditional site of this Cave in the Wâdy Khureitun near Bethlehem, as possessing superior claims in everything but similarity of name to the ones recently discovered at 'Aîd-el-Mâ.

Without for a moment questioning the fact that there was a city called Adullam in or near the Wâdy es-Sŭnt in the *Shephelah*, there may have been more than one city or cave known by that name;[1] indeed Josephus, though he says it was "a cave near the city of Adullam," yet immediately afterwards implies that it was in "the desert," or wilderness of Judæa.

The objections to 'Aîd-el-Mâ are as follows:—

(1) Neither the caves nor the hill in which they are situated are places of very great strength, and are no more entitled to be called "the hold" (1 Sam. xxii, 5; 1 Chron. xi, 16) than scores of others similarly situated They are far too much exposed to be resorted to as hiding places.

(2) 'Aîd-el-Mâ is only 10 miles (as the crow flies) from Gath (Tel es Sâfia), and it is hardly likely that the Philistines would tolerate the presence of such a foe as David so close to their chief city.

(3) In their expedition to Rephaim and Bethlehem (1 Chron. xi, 16), the Philistines would probably pass within sight of David, and it is exceedingly improbable that they would leave such an enemy in their rear to harass them and cut off their communications.

(4) Bethlehem is too far away, and out of sight on the other slope of the watershed. It would take the best part of a day for the three men

[1] There was more than one Kadesh, Carmel, Gibeah, Gilgal, Bethsaida, Ramah, &c.

to get to Bethlehem and back. Besides, why should David so long for water from the well of Bethlehem, when he had a much more copious spring of better water at his feet at 'Aîd-el-Mâ ?

(5) David in taking his family to Moab would have to pass again by or near Bethlehem, which does not so well fit in with the narrative as would a place in the wilderness of Judæa.

In favour of the traditional site :—

(1) It is one of the most remarkably situated caves in the side of one of the grandest and wildest gorges in Palestine, the narrow path to it blocked by a fallen rock, so that a few resolute men could defend it against a host. Moreover, the existence of such a stronghold would not be suspected. Our local guide from Bethlehem even was at fault and had to get the assistance of a shepherd to find out the entrance. There are three caves opening one into the other, of which the first is lofty and of considerable size, and could easily accommodate 400 men. We found the floor dry and dusty even towards the end of the rainy season.

(2) It was in David's own country, "the wilderness of Judæa," where he had been accustomed to feed his sheep (1 Sam. xvii, 28). Such a cave would naturally suggest itself to him as a safe and almost inaccessible hiding place.

(3) It was only three or four miles from Bethlehem (as the crow flies), and from the hills above it Bethlehem could be easily seen encompassed by the Philistines. In that "dry and thirsty land" we can appreciate David's longing for "water from the well of Bethlehem," as his eye rested on his beloved city.

(4) It falls in most naturally with David's bringing his parents from Bethlehem, and then for further security taking them on to Moab (1 Sam. xxii, 1, 3, 4) for this cave lies between Bethlehem and Moab; whereas 'Aîd-el-Mâ is on the wrong side of Bethlehem.

(5) In short it is impossible to conceive of a site, which in every particular (except the modern name) agrees with all that Scripture tells us about the Cave of Adullam.

Would that all traditions were equally fortunate !

I shall not easily forget our visit to this cave. Our guide had provided lights and a ball of string so that we should not lose our way. But when we were in the largest cave we forgot all about our guide, and explored on our own account.

On our return, in the low and narrow passage connecting the first and second caves, we heard groans and cries for help, and were amused to find our guide, who had attempted to *follow* us, lying on the ground with light extinguished, holding on to the end of the string, and "trembling like an aspen leaf"—probably from fear of the ghosts that might haunt the cave.

III.

THE PLACE OF ELIJAH'S SACRIFICE

Is near the edge of a hollow or sloping plateau, about 300 feet below the actual south-eastern summit of Carmel, and probably close to a spring which Tristram shows to be a never-failing one from the fact of the shell-mollusc *Neritina michonii* being found in it. The sea can be seen from the *shoulder* of the mountain, about ten minutes' walk from this spot. Hence it was not necessary for Elijah's servant to go to the very top seven times, as some writers assert.

Everything here, as elsewhere, corroborates the minute accuracy of the Scripture narrative.

HENRY BRASS.

St. Matthew's, Red Hill,
February, 1890.

REV. C. DE CARA AND THE HITTITES.

IN a letter to the "Civilta Cattolica," the Rev. C. de Cara, S.J., has recently announced :—

"Of the similarity of the characters of the archaic alphabet of Cyprus with those of the inscriptions of Hamath near the Orontes, no one has sought the reason which now I have found, and which seems to me convincing, viz., that the origin of the archaic Cypriote is due to the Hittites."

It is curious that the Rev. Father should claim a discovery already indicated by Dr. Sayce in 1880, and which I have endeavoured to elaborate for the last three years; but the result, no doubt independently reached, serves to show the soundness of a comparison so generally accepted.

C. R. C.

PELLA.

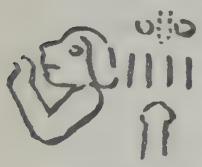
DOUBTS having been expressed as to the position of Pella, and its identity with Fahil, the following notes may be of use :—

Jabes, a large village, was six Roman miles from Pella, on the way to Gerasa. Amathus, beyond Jordan, was 21 Roman miles from Pella, towards the south (not the Amathus near Gadara, but the southern town of the name). Arbel, beyond Jordan, was "in finibus Pellæ." Jabesh Gilead was six miles from Pella, on the mountain in the direction of Gerasa (*see* "Onomasticon"). In the Talmud חמיתה דפחל or "the Hot Bath of Pella" is mentioned (Tal Jer Shebiith, vi, 1), evidently the springs at Tell Hamma. The name of Jabesh is preserved in Wâdy Yâbis. Amathus is Tell Ammâta, 15 Roman miles in a direct line south of Fahil.

C. R. C.

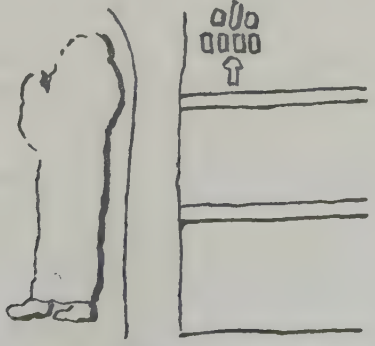
NEW "HITTITE" BAS-RELIEFS.

In the important work by MM. Humann and Puchstein, just published, a new bas-relief with six lines of the Altaic Hieroglyphs is represented (Plate XLIX), which, though unfortunately so worn as to be for the most part illegible, still furnishes us with several new ideas. This figure, discovered in 1882, comes from Marash (Figs. 4 and 5), and represents a long-robed personage facing to the left. The hair is arranged in a curled-up plait or pigtail. The beard is long; the garment is fringed; the shoes, as usual, curled at the toes. A round skull cap seems to be represented. Marash lies at the foot of the Taurus, 70 miles north-east of the head of the Gulf of Alexandretta, and several Altaic sculptures have been found here previously.



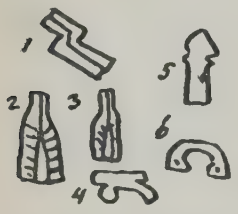
The inscription differs from others, inasmuch as the whole of the lines appear to read from left to right, not alternately, as at Hamath. On the Marash lion the text also reads in the first line from the left (as does Hamath Stone, No. IV), and we may, perhaps, suppose the new text to be later than those of Hamath and Jerablus, especially as the writing seems to be more phonetic in its character.

The commencement of the text as shown in the accompanying sketch is also, I believe, the same as that on the lion given below, on the shoulder of which is a figure which may be regarded as a fuller form of the common emblem of "speech." These four emblems

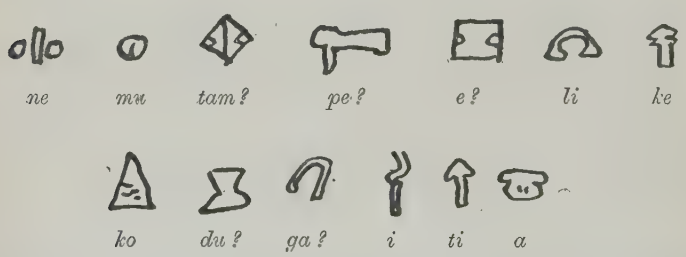


should, I believe, be read EN-NE-ME-KE, signifying "speech" or "invocation." The termination in *mek* is known in other cases on the

Hittite texts, as, for instance, on the Hamath Stones Nos. I, II, III, where we may read the group ZI-KU-KU-ME-KE-LI, which, as an Akkadian expression, I suppose to mean *Zi Kukumekli*, or "spirit protecting."[1] The termination in *mek* is very distinctive of Turanian speech. In Turkish it forms the participle, the infinitive, and the abstract. It also occurs in the ancient inscriptions of Malamir in such words as *tarmak*, "the totality" (Sayce, "Malamir," p. 74), with the same abstract signification.



The new text, like the Marash lion, is written in a very confused manner, and the sketch given is quite illegible for the most part. With the exception of the head and arms the figure is covered as well as the field of the block. This arrangement is the same which occurs on the Assyrian figures in the British Museum. The common Hittite signs given below occur frequently :—



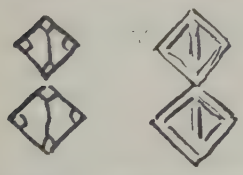
The position of *li* as a termination appears to be the same throughout as in the texts already known. As far as can be judged from the decayed state of the text, there do not seem to be any new symbols unknown before.

On the same plate (Figs. 1, 2, 3) is another "Hittite" monument from Samsat (the ancient Samosata on the Euphrates), which lies far to the

[1] The word *Kuku*, "to help," "protect," "defend," as an Akkadian word is well known, and seems to survive in the Cantonese *chiu-koo*, "to help." It appears also in the Susian *kuku*, "favour," and in the Medic verb *kkuta*, "to help," or "protect," or "favour"; and at Malamir *kukuna*, "of favour." It may be connected with the old Turkish word *kuch* or *koch*, for "power," and in Hungarian it again appears in *kegy*, "favour." Although I pointed out in the *Quarterly Statement* the connection between Akkadian and Chinese before Mr. Ball commenced his interesting papers on the subject, it seems to me that the Tartar, Turkish, and Mongol languages are far safer for comparison than even the most archaic of Chinese dialects, because the phonetic decay in the latter has (as is well known) been so great that comparisons are apt to be misleading.

north-east of Carchemish and south of the Taurus. This is also much decayed, but consisted of nine lines. The deer's head (TAR) and the other signs are the same apparently as in previous texts, and the rare sign MI for "country" may, perhaps, occur in the last line.

MM. Humann and Puchstein have also given copies of two texts (the lion text and the text with two seated figures) from Marash, which were already known, but of which new copies cannot fail to be useful. The latter especially was not well copied before, but the extreme irregularity of the writing renders it unusually difficult to follow. It clearly reads from the right, and seems to be almost entirely phonetic. The new texts seem, perhaps, to confirm what was before doubtful, namely, a reduplication of the sign which (comparing with the oldest Cuneiform) I have supposed to represent the sun with the value *ut* or *tam*. In fact I think it is established beyond doubt that this sign has the latter value in the word *Tam-zi* (Tammuz) found on a seal and at Carchemish.



This is also shown in the new copy of the lion text as occurring in the first line, followed by *Ka-ne-ke Tarku*. It is possible, however, that these emblems have not been quite correctly copied, and that they represent a late form of the emblem *an*, in which case the reduplication may be read ANAN, meaning either "Gods" or "King."[1]

The general impression obtained from these texts is that they are later and (as is natural) less ideographic than those of Carchemish and Hamath, representing a northern extension of Hittite civilisation.

C. R. Conder.

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[1] By the light of these new copies we obtain the following commencement for the lion text,

EN	NE ME KE	AN U GAL? A	AN DU KE LI	KA	ZU? RE THE ...	U	NE TAR	AN AN	KA NE KE	TAR KU	KU	DU KE LI

This seems to be a dedication or invocation, for the second word is well known as the name of a god—at Ibreez for instance. The commencement is thus very like that of some of the texts on the old statues of the Akkadians at Tell lo; and roughly speaking it seems to run, "Invocations for Anu.... the living god.... the royal prince Tarku (or prince of gods Tarku....). It is known that Tarku was the name of a deity in Asia Minor as well as a word for prince.

THE MALULA DIALECT.

The interesting paper in last *Quarterly Statement* by Dr. Bliss on the Syriac Dialect of Malula gives several indications of the archaic character of the ordinary Fellah dialect of Palestine to which I have lately again called attention.

As regards the phonology—

ك, pronounced ch (as in "chaff"), is the common Fellah pronunciation of the letter.

ق pronounced without guttural sound is also not uncommon among Fellahîn.

ع for hamza, is also a Fellah change ("Lanberg," p. 82, gives many examples).

ش, pronounced س, as in *sejratha*, "tree," is the Fellah *sejerah* for *shejerah*, "tree."

In grammatical forms—

o for 3rd person singular possessive is the Fellah و. *Abu*, "his father," for literary *Ab-hu*.

Phash answers to the common Fellah *Fihâsh*.

Some of the words are also so used in Fellah speech, *e.g.*, *Shenna*, "rock" (as in Hebrew); *Ho*, or *Hey*, "this"; *Blato* (Fellah, *Blâd*), "country"; *Blota* (Fellah, *Belled*), "village."

The Fellah dialect, indeed, seems to have been but little affected by the literary Arabic, and retains much of its old Aramaic character.

C. R. C.

MAR TUKLA.

In the paper on "Ma'lula and its Dialect," by Mr. Bliss, he says, "Mar Tukla is said to have been a companion of St. Paul's, the tradition is doubtless ancient." (*Quarterly Statement*, April, 1890, page 83.) This would, I think, hardly lead one to understand that the story of St. Paul and Thecla, as related in the apocryphal "Acts of Paul and Thecla" (to which I imagine Mr. Bliss refers) was as old as 170 or 180 A.D., which is the date Dr. Salmon assigns to it.

Leslie W. Troughton.

GREEK INSCRIPTION NORTH OF DAMASCUS GATE

In the Jerusalem volume of "Memoirs" will be found a collection of numerous Greek texts of the same character as that published in the last *Quarterly Statement*. They come from the Wâdy Rabâbeh cemetery and from other parts of the town. In the Muristan I found such a Greek text, which cannot well be older than 900 A.D. Θηκι διαφερουσα Μηνα υπερ Ωπρου (Jerusalem vol., p. 426). At the church by Jeremiah's Grotto, Lieut. Mantell and I copied another text of the same character. It was originally written across two slabs, and we only obtained the right hand halves of the lines (Jerusalem vol., p. 392). This was also a deacon's tombstone.

The text from Boeckh given by Mr. A. S. Murray is only a bad copy of the inscription on the tomb of Thecla Augusta (9th century), fully described in the Jerusalem volume of the "Memoirs" (page 418). This is one of texts in the cemetery of St. Sion, in Wâdy Rabâbeh.

The Christians were still powerful in Palestine under the Arab Khalifs, and the tombstones are written with the same contractions and general style, and seem not earlier than about 8th to 9th centuries, A.D.

C. R. C.

NOTES ON DR. POST'S PAPER.

I VENTURE to make a few notes on this paper. The existence of the *Beech* in Syria is of some interest philologically, and it would be interesting to know where it occurs. It is known in Asia Minor and in the Caucasus, and grows on chalky soils.

The Papyrus is not confined to the Jordan valley. I have seen it in several places on the coast near Sidon, in the Zerka, and further south, as noted in the "Memoirs."

It is certain that the lion still existed in the Lebanon in 1300 B.C. ("Travels of a Mohar").

It is certain that the crocodile exists in the Zerka, but I found no native who knew of it in the Kishon.

The wild boar is found in the mountains in all parts of Palestine where cover exists.

I have seen supposed specimens of *Tin* from the Lebanon.

Cholera sometimes spreads in the mountains. It reached Safed (3,000 feet above the sea) when I was there in 1874.

The "ancient language" is not confined to a few villages, I think, being recognisable in Fellah speech throughout Palestine.

C. R. C.

THE INSCRIPTIONS OF EDREI.

Herr Schumacher has given us several Greek inscriptions which are not in Waddington's great work, but those from Edrei are found in the "Inscriptions Grecques et Latines de la Syrie," copied in 1862, and published by Waddington in 1870.

The long text, which is No. 2070 *e.* of Waddington, has, however, been better copied by Herr Schumacher (though some parts seem doubtful), and the date is certain. The following are the parts which appear to me to be quite clear :—

Αγαθη Τυχη

1. Υπερ σωτηριας και νεικης του Κυριου ημων Αυτοκρατορος
2. Γαλιηνου Σεβ. εκτισθη . . . . . του Σεβ. προνοιας
3. (Ιουλ)ιου (Ιουλ)ιανου του κρατιστου . . . . . .
4. . . . . Ισιδωρου . . . . . .
5. . . . . M. Αντου. Βασσου . . . . . Αιλιου Βασσ .
6. ου και Ζηνοδωρου Ταυρινου και Σαβινου

ET. P. N. H.

The text is of the reign of Galienus, and of the year 158. Galienus reigned 260–268 A.D., and the date is clearly of the era of Bostra (105 A.D.), which gives us 263, or the fourth year of Galienus.

The Julius Julianus of this text is a person well known from two other inscriptions—one at Bostra and one at Palmyra (Waddington, Nos. 1951 and 2580). From the former we learn that he was Prefect of the 1st Parthian Legion of Philip, or Commander of Parthian auxiliary cavalry. Philip was an emperor of Arab origin, and Julius Julianus may have been of the same race. Philip was killed in battle by Decius, near Verona, in 249 A.D., so that Julius Julianus was a person of importance some 14 years before the date of the inscription of Edrei, but not more than 19 since Gordian III was murdered in 244 A.D.

From the Palmyra text we learn that Julius Julianus was commandant of cavalry at Palmyra. He held the high rank of *militia quarta*.

As regards the other names, that of Bassus is often found in the Hauran. Zenodorus, son of Taurinus, might be a relation of Rabbelus, son of Taurinus, whose name occurs at Dekîr, in Trachonitis (Waddington, No. 2537 *g*). Another Zenodorus, son of Bathanus, is noticed as dying at the age of 42 at Edrei (2070 *l*).

The Hauran texts are of the highest value for the history of Syria from the time of Herod and Agrippa down to the first days of the Moslem Conquest. Of these texts 1,600 are collected. They not only give decrees of the emperors for the rule of the province, and for the discouragement of the *baksheesh* system, with details as to the Roman forces, but they show that as late as the time of Agrippa I the inhabitants of Bashan

were living in underground caves, and had not begun to build houses. They show us how late Paganism survived, a heathen temple having been built in 320 A.D., in the Hauran, to Apollo Aumos, by Arabs. In another case in Trachonitis such a temple appears to have been converted into a church. The gods of Greece—Zeus, Helios, Selene, Kronos, Herakles, Athene—were adored side by side with Arab deities, Dushera, Aziz, Aumu, &c. The Arabs were early converted to Christianity, and a Greek-Kufic bilingual of 586 A.D. shows that they built a church at Harrân only a few years before the Moslem Conquest.

Their creed was apparently heretical and Ebionite. They adored Sergius and Bacchus, Martha, Marthine, Elijah, St. George, and Job, side by side with "the God of Abraham, Isaac, and Jacob," and with Christ and the Virgin Mary.

The earliest distinctly Christian texts here, as in Italy, belong to the 3rd century, A.D. The Saints Martha and Marthine were adored, according to Epiphanius (Adv. Hæres., II), by the Elkaisites and Sampseans in Arabia (*see* Waddington, p. 570). These heretics of the 3rd century A.D. were also found along the Euphrates, and followed a prophet of Hadrian's time. They were great exorcists, and their doctrines as to the successive incarnations of our Lord were shared by the Nazarenes of Syria, whom the Elkaisites also resembled in their austerities. They appear to have been still known to Moslem writers in the 10th century A.D. as *Mughtasileh*, or "baptists."

C. R. C.

MOSAIC AND EMBROIDERY IN THE OLD TESTAMENT.

Mosaic wall decoration is generally acknowledged to be of ancient origin, and I am inclined to regard this art as of extreme antiquity in Jerusalem, and as being perhaps of Jewish origin. There is, I think, distinct allusion to the use of mosaic ornament, or "embroidery in stone," in 1 Chron. xxix, 2, where King David is enumerating the materials prepared by him for the temple—gold, silver, brass, iron, and wood, onyx stones, שוהם, stones for setting, מלואים—"glistering stones of divers colours," אבני פוך ורקמה, and every precious stone יקר, and stones of marble, שיש. The words, אבני פוך ורקמה, rendered in our Authorised Version "glistering stones of divers colours," can be translated more closely to the Hebrew words and construction by "stones of colour and embroidery." פוך "Colour" may imply stain, or artificially produced colour; and רקמה, "embroidery," is rendered in Exodus xxxviiii, 23, &c., &c., Judges v, 30, and Psalm xlv, 14, as embroidery and needlework in stuffs, and it carries with it the idea of overlaid, applied (*appliqué*) ornament (still much used in Egypt, Palestine, Turkey, Persia, &c.). Appliqué embroidery appears to have been used for stuffs

when parti-coloured רקמה designs were placed upon the material of which articles of dress or furniture (curtains, &c.), were made. Travellers are familiar with the bold designs thus placed as ornaments upon Egyptian tents. The Fellaheen of Palestine still embellish in this way the clothing worn by men and women, thus perpetuating the art which was used to decorate Joseph's coat of "*many colours*," literally of "*many pieces*," for that is the exact translation of כתנת־פסים (Genesis xxxvii, 3).[1] "Many pieces" of multi-coloured materials are employed to produce the effect—as may be more fully seen in the splendid embroideries of Resht, in Persia, and in the quaint patterns worked by the Turcoman women in their encampments.

But to return to "the embroidery in stone," known as mosaic. Some writers have ascribed the origin of the art to Moses, the Hebrew Lawgiver. Be that as it may, there is in 1 Chron. xxix, 3, evidence that the art was known to King David and his people.

Josephus also appears to refer to it ("Antiquities," viii, 5, 2) as having been used for wall decoration in the palace of King Solomon:—

"To this was joined another house that was built for his queen. [It is well to remember that the Hebrew word בית, house, often means 'room,' though it is also used for 'mansion.'] There were other smaller edifices for diet and for sleep after public matters were over, and these were all floored with boards of cedar. Some of these Solomon built with stones of ten cubits, and wainscotted the walls with other stones that were sawed, and were of great value, such as are dug out of the earth for the ornaments of temples and to make fine prospects in royal palaces, and which make the mines whence they are dug famous. [This mention of thin marble slabs for wainscotting reminds one of the sculptured slabs used in Assyria for the same purpose which have been found at Nineveh, &c.] Now the contexture of the curious workmanship of these stones was in three rows, but the fourth row would make one admire the sculptures, whereby were represented trees and all sorts of plants, with the shades that arose from those branches and leaves that hung down from them. Those trees and plants covered the stone that was beneath them, and the leaves were wrought so prodigious thin and subtle that you would think they were in motion; *but the other part up to the roof was plastered over, and, as it were,* EMBROIDERED WITH COLOURS AND PICTURES."

This passage brings before us the splendid walls—built of great stones—marble-lined to a certain height; sculptured where on a level with the eye, and then high up, above the marble wainscot, enriched with glowing mosaic pictures of many colours, set in "plaster."

Observe that only the higher parts of the walls were thus embroidered. It is just in the higher parts that we find mosaic work in the Dome of the Rock on Moriah, at St. Sophia at Constantinople, and in the Church

[1] So also in 2 Samuel xiii, 18.

of the Nativity at Bethlehem. These latter were discovered during our residence at Jerusalem, when a happy chance revealed the fact that beneath the whitewash that covered the walls of the nave lay preserved the gold and coloured mosaic work, placed high (and in the Dome of the Rock at an angle), so as to reflect, as only "glistering" mosaic could, every ray of light coming from below or from above. The Church of the Holy Sepulchre at Jerusalem was decorated with mosaic in former times, but this was destroyed by the great fire of 1808. I have myself picked up many fragments of mosaic out of the *débris* from that fire, which still lay (when first we went to Jerusalem) in heaps on the hill west of the city beyond the Valley of Gihon. I still possess some of the little cubes in red, green, blue, and well-gilded glass. I have also found similar mosaics in the ancient baths, probably Herodian, which we discovered in Solomon's gardens at Umtas.

Incomparably the finest specimen of mosaic decoration still existing in Palestine is preserved for us in the Dome of the Rock on the Temple site at Moriah—that treasure-house of exquisite design, execution, colouring, and form, which beautifies the otherwise desolated site of former Temple magnificence. Here we find the sumptuous mosaics above the marble pillars, in the rising of the arches up toward the spring of the great dome, where but for the reflection from their brilliant surface the effect would be dark and sombre. The arabesques are boldly traced in colour on the golden ground to shine and sparkle in a thousand tints, produced by the play upon the mosaic of the changeful lights that reach them through open door or coloured window as the sun passes round from his rising over Olivet to his setting in the west. There is here a faint reminiscence of the Temple splendour, with its carvings wrought in gold—its metal work in silver, brass, and iron—its onyx, its gems—its precious stones and marble, and its mosaics in "glistering stones of divers colours"—"stones of embroidery," used where blended tints and reflected lights could now subdue and now enhance the glory, and bring out the full, rich harmonies of tone and colour in that resplendent sanctuary.

The use of mosaic pavement in Palestine was evidently very ancient. I have found the small stone cubes, red, black, and white, scattered in every part of the country—among the ruins of towns and of villages, and also loose in ploughed fields at a distance from any village. We discovered remains of pavement, in various places, only hidden by a few inches of soil, where little else remained to show that here had been some dwelling or public building.

The finest specimen still extant near Jerusalem is the pavement which covers the floor of the old Georgian Church, in the Convent of the Cross, west of Jerusalem (now in the hands of the Greeks), which still bears sad traces of the murders of the Christians who had sought shelter within their sanctuary, when Chiroses, the Persian king, and his heathen army broke in upon them. The great purple stains testify to the fate of those poor martyrs, while at the same time giving us some certainty as to the age of this most interesting mosaic floor.

While tracing back the history of embroidery in stone, the kindred topic of embroidery in stuff claims attention. I have referred above to the earliest allusion to appliqué work in the history (Genesis xxxvii) of Joseph's coat of many colours, and we find repeated mention of the same art in the history of the preparation of the Tabernacle in the Book of Exodus.

"An embroiderer," רוקם, was one of the artificers mentioned, Exodus xxxviii, 23, as distinct from the "designer" or "thinker," חושב.

The embroidery in blue, purple, and scarlet, that is, the laying on of thin and coloured material (for that is the meaning of the verb רקם, with which is closely connected the idea of thinness, as in Arabic, رق and رقيق), was used for the hanging of the gate of the outer court (Exodus xxvii, 16); for Aaron's broidered coat (Exodus xxviii, 4); for his girdle and those of his sons (רקמה); "Appliqué embroidery" (translated "needlework") is also mentioned in Judges v, 30, and in Psalm xlv, 14. The word would also be accurate in describing embroidery wrought on to stuff in gold thread, coloured silks, or braids, and in Judges v, 30, this is spoken of as רקמתים, applied embroidery, the same on both sides. The women of Israel thus appear to have been celebrated in the days of Deborah for their skill in embroidery, and to have practised the art, still preserved among orientals in Turkey if not in Persia, of working so that both sides should do alike—the wrong side as well as the right side; for the word used by Sisera's mother means "embroidery in double" (Authorised Version, "needlework on both sides").

Skill in original design is also expressly mentioned in the history of the preparation of the Tabernacle.

The very same verse (Exodus xxxviii, 23) which mentions Aholiab as the "embroiderer," רוקם also mentions him as a designer, חושב literally "thinker" (Arabic حسب to think, calculate). This word is rendered in our Authorised Version "cunning workman." In Exodus xxxv, 32, חושב מחשבות means "thinker out of thoughts." "To devise curious work," in Exodus xxxi, 4, לחשוב מחשבות, "to think out thoughts," whether in gold, silver, brass, precious stones, wood, or embroidery. Bezaleel and Aholiab were specially given skill in design and in execution, that they might carry out under Moses' direction the plans given upon Mount Sinai.

Who that has watched the "cunning workmen" of to-day in the Bazaars of Jerusalem, Damascus, or any other Eastern city can fail to be reminded of these illustrious artificers who were, to some extent at least, founders of these arts in Israel.

The worker in metal, as he carries out the beautiful design which he devises as he goes on, is no less interesting than the gem or seal engraver, deep in thought as he turns the polished stone hither and thither, pro-

ducing the desired name or couplet, and beautifying it with here a flower and there a leaf cunningly inserted among the flowing lines. Thus (though probably without the added ornaments) were graven the golden plate for the head dress of the High Priest (still existing in our Lord's day), and the inscriptions on the precious jewels for his shoulders and for his breastplate.

And so with the embroiderer. We see the survival of the art in the rich effects produced by the Eastern craftsman as he sits upon his shop front laying braid or fine gold thread in mazy and intricate patterns, designing as he works, and embellishing the velvet, cloth, or silken cushion, or jacket which he is making.

That gold thread was used in the Tabernacle embroideries is certain from Exodus xxxix, 3, where, in speaking of the working of the Ephod, it says that they "beat gold into thin plates and cut it into wires," literally "threads," for the word here, פתילים, is to this day used for the soft threads of lamp-wick, and the same word is used in Arabic for the same thing. (*See* also "lace," for "braid," in Exodus xxviii, 28.)

This gold thread was made to work in with the blue, purple, and scarlet with "cunning work" (design). The "cunning work" of embroidery was used not only for the Ephod, but also for the breastplate (Exodus xxxix, 8, 15), for the curious girdle of the Ephod (xxviii, 27, 28, 39; xxix, 5; xxxix, 5, 20, 21).

It was in this kind of work that the Cherubim were wrought into the ten curtains for the innermost covering (Exodus xxvi, 1), and for the vail before the Ark (xxvi, 31). As to Aaron's coat, כתונת (Exodus xxviii, 4, 39), that was to be enriched with שבץ, "chequered" embroideries. This is the very word used in Psalm xlv, 14, for the golden chequered robe of the King's daughter, "all glorious within," as well as on the outer or right side of the work. The chequered pattern of gold thread embroidery among coloured silks may still be seen in oriental work, and it is one of the most magnificent in effect. Enough oriental art remains to this day to give us some idea of the splendour of the embroideries in stone, and in gold and silk, as wrought by the ancient Israelites for the Tabernacle in the Wilderness and for the Temple on Moriah.

E. A. Finn, M.R.A.S.

The Elms, Brook Green, W.

Note.—For the use of the verb חשב (to think out), see Amos vi, 5, where it is translated "invent" (instruments of music like David); and Daniel xi, 24, "forecast devices."

SUN-BIRDS.

On page 41, January *Quarterly Statement*, Dr. Selah Merrill mentions having seen and shot the Palestine Sun-bird at Jaffa, and in the Jordan Valley. We saw some near Jericho in February, 1847, and obtained specimens; and we had in the museum of our Literary Society at Jerusalem, a specimen which had been shot at Sidon by Mr. Abela, who prepared it and sent it to Mr. Finn. We also, like Dr. Merrill, noticed the great variations in the coming to Palestine, or to parts of the country, of migratory birds. The natives always rejoice when great flocks of storks come, as bringing good crops and prosperity. They eat the locusts. Some years none were to be seen near Jerusalem.

We saw them in August, 1859, nesting in the pine trees near Acre. (Ps. civ). It is very curious to see and hear them on their departure early in November—when they wheel in vast hollow circles over Jerusalem. The numbers of small migrants also varied greatly.

I have also heard in October, on a still starry night, vast numbers of bee catchers passing westwards (or south-westward). I tried in vain to see them; standing in the open air for some time. There was neither cloud nor mist, yet they could not be seen though heard most distinctly, and the snapping of thousands of little beaks had a most singular effect, while the birds were invisible. This snapping sound is familiar enough in the hot summer weather in the day time, when the bee catchers fly and wheel after their prey, their bright plumage glittering in the sunshine. The storks, when wheeling in the air, also make a clapping noise, with either their beaks or their long legs.

E. A. Finn.

NEHEMIAH'S WALL.

Mr. G. St. Clair holds (January *Quarterly Statement*, pp. 47–50) that as the Upper City was (according to Josephus) surrounded by a wall of its own, therefore the defences of the south end of the Tyropœan must have formed a bay or loop line. This was the view taken by Mr. Finn and myself when in Jerusalem, and we hold, as Mr. St. Clair does, that here were the "two walls" between which Zedekiah escaped by the King's garden to the Jordan Valley (Arabah), as Manasseh appears to have attempted before him (2 Chron. xxxiii, 11), when the Chaldeans "caught (or seized) him among the thorns," and as the Jewish leaders attempted to do after Titus had taken the Temple.

"They caught Manasseh among the thorns" is closer to the Hebrew than our translation—

וילכדואת מנשה בחוחים

Was the Tyropœan even then a place for thickets of thorns? as it is now, full of prickly pear cactus.

E. A. Finn.

THE STONE MOUNDS ON THE REPHAIM PLAINS.

On page 22 of the January *Quarterly Statement*, Herr Schick mentions the Seba' Rujum near Bait Safâfa, on the Plain of Rephaim, south-west of Jerusalem. These mounds of loose stone are of great size, and are *unlike* others in the country. It would be very desirable that they should be examined. The accumulation of small stones in them is enormous, and evidently ancient. We always regarded them as artificially made for some special purpose—possibly as burial cairns on a battlefield, and certainly erected with immense expenditure of time and labour. Can they be memorials of the defeat of the Philistines by David? (2 Sam. v; 1 Chron. xi, xiv).

E. A. Finn.

THE WATERS OF MEROM.

The Rev. Canon Gover argues (p. 52 January *Quarterly Statement*) that the expression "the waters" should not be understood to mean a lake, but rather a stream and its head waters.

An instance in point may be found in Joshua xvi, 1. "The waters of Jericho," probably Elisha's fountain and the stream that flows from it.

A similar expression is used in Scotland—"Allan waters," "the water of Gala," &c. Canon Gover also mentions Misrephothmaim, pp. 52–53. I would suggest the great headland north of Acre, now called the "Musheirifeh," as probably Misrephothmaim, even though the Hebrew letter is *Sin* not *Shin*—Misraiphoth of the Sea—as in Symmachus. Was not "the Valley of Mizpeh eastward" of Josh. xi, 8, the Valley of Safet? צפת = מצפה. Mr. Finn held that Safet was Mizpeh.

It is well to note that the difference in Hebrew between Madom and Marom would only be that between ד and ר (D and R) מדום or מרום.

E. A. Finn.

THE TSINNOR.

So much depends on the identification of the Tsinnor or "gutter" of 2 Sam. v, 8, at which Joab climbed up into the Jebusite fortress, that I venture to contribute a few remarks on the subject based upon the Bible narrative and that of Josephus, and the discoveries of Sir Charles Warren.

First as to the meaning of the word Tsinnor, צנור. It occurs in Psalm xlii, 7, where it is translated "waterspouts," but "gutter" or "watercourse" would seem to be more correct if we take into account the Chaldee form צנרין, as used in the Targum of Ecclesiastes i, 7, for נחלים, brooks (hollow channel).

Secondly as to the site of the Tsinnor of 2 Sam. v, 8. Josephus, in his paraphrase of 2 Sam. v, 8, tells us that there were ditches at the base of the citadel.[1]

It is most important to notice that Josephus declares that the Upper City, "called by us the Upper Market-place," was that upper city which King David took from the Jebusites and called the Citadel (Wars v, iv, 1, and Ant. vii, iv, 1). The "ditch," therefore, by which Joab climbed was a "ditch," gutter, or "narrow watercourse," at the foot of the Upper City on the south-western hill, called in the Bible Zion.

This establishes the identity of Zion (though Josephus never uses that word), the city of David, with the Upper City and Market-place of Josephus, on which he tells us were the palaces of David; of the Asmonean Princes and of Herod. Now there is but one place connected with the south-western hill, where a narrow watercourse has been found sufficiently important to be mentioned, as the Bible and Josephus mention the "gutter" and "ditch" in the description of the Fortress Hill. That watercourse, ditch, or gutter, is cut in the rock just above the lowest cleft of the Tyropœan, where it separates the east mountain, Moriah, from the South Western Zion. It was discovered and thoroughly examined by Sir Charles Warren, who came upon it at Robinson's Arch, some 70 feet below the present surface of the ground. It is cut in the side of Zion, only 24 feet above the bottom of the Tyropœan, itself a mere gully at this part (and at present filled up to a depth of 89 feet).

At page 124 of "The Recovery of Jerusalem," Sir Charles Warren says: "The west wall of the Sanctuary at Robinson's Arch cuts through an ancient system of rock-cut water ducts and tanks running along the western side of the Tyropœan Valley," *i.e.*, at the base of the south-western hill, Zion.

The discovery was made while examining a pavement (deep down below Robinson's Arch)—a pavement belonging to a roadway evidently of great antiquity. Upon it the great voussoirs of Robinson's Arch were found lying huddled just as they had fallen at its destruction. Below this ancient pavement, at a depth of 23 feet, were found two great voussoirs of an arch (belonging to a still older viaduct) "jammed in over a GREAT ROCK-CUT CANAL running, from north to south, 12 *feet deep and* 4 *feet wide*, its eastern side being about 12 feet from the Sanctuary wall [the western wall], but it does not run parallel to it, and was probably in use before this portion of the wall was constructed" [by Herod the Great; for here we have his addition to the Temple, which he carried for symmetry's sake across the Tyropœan on the base of Zion.]

Here, then, we have a canal, ditch, Tsinnor or gutter, worthy of mention as a landmark. It was arched over. Sir Charles Warren examined it northwards. At page 107 we read: "Higher up towards the north this canal was found to open into a circular rock-cut pool, of which only half is to be seen, as it is CUT THROUGH *by the foundations of the Sanctuary wall*,"

[1] Considering the then depth of the Tyropœan in its original condition at its narrowest point, Josephus may have held it to be one of the ditches.

which shows that it existed before Solomon built that wall; for here we reach the old part that was built by him.

On page 109 Sir Charles Warren says, "the winding aqueduct was cut in the rock" before the Temple was built. That is to say, we have here at the narrowest part of the Tyropœan, just above its bed, and on the shelving base of the mountain, a vast cutting of 12 feet deep by 4 wide *in the live rock*. This was on the eastern outer side of the Zion fortress, and before the neighbouring mountain of Moriah was built upon or walled, while it was yet the property, the open threshing floor of Ornan the Jebusite.[1] This gutter in David and Joab's time was a deep-cut trench on the right bank of the Tyropœan. From the Bible narrative, 2 Sam. v, 8, we learn that it was David who appealed to his army to smite the Jebusites (whose blind and whose lame scoffed at him), and named the gutter as the point to be reached. From 1 Chron. xi, 6-8, we learn that it was Joab who first went up and won the chief command.

Josephus exactly confirms this: "The King, knowing that the proposal of dignities and rewards would encourage the soldiers to greater actions, promised that he who should first go over the ditches that were beneath the citadel, and should ascend to the citadel itself and take it, should have the command of the entire people conferred upon him. So they were all ambitious to ascend, and thought no pains too great in order to ascend thither. However, Joab, the son of Zeraiah, prevented the rest, and as soon as he was got up to the citadel, cried out to the King and claimed the chief command. And thus were the scoffers silenced."

Later, when the Temple fortress was built, and its stupendous walls on Moriah crowned the left bank of the Tyropœan, this ditch became "the fortified ditch" between the two walls of Zion West and Moriah East. *See* Josephus, Ant. x, viii, 2, as to Zedekiah's escape to the desert. In 2 Kings xxv, 11, Jeremiah xxxix, 4, and lii, 7, we read that Zedekiah fled "by the way of the gate between the two walls which is by the King's garden to the plain" (Arabah, *i.e.*, Jordan Valley), where he was caught in the plain of Jericho. The Temple was already in the hands of the Assyrian army. Zedekiah was therefore fleeing from the citadel, which had not yet been taken, down through the ditch between the two walls of Zion and the Temple (on his way to the Kedron Valley). The same thing was also attempted afterwards by the Jewish leaders in the Upper City after Titus had captured the Temple (Wars vi, viii, 5).

But in David's time the ditch or gutter was not thus protected and shut in. It was, nevertheless, an additional defence for the citadel of Jebus just at the point, where, far up the face of the mountain, the fortress stood upon the scarped cliffs visible to this day as we look from Olivet towards Zion. Truly this part must have seemed to the Jebusites

[1] It is worth notice that David paid Ornan 50 shekels of silver for the threshing floor and for the oxen—(2 Samuel xxiv, 24); but that he gave 600 shekels of gold *for the place*, that is for the whole Temple site—the mountain, which Solomon walled round for the Sanctuary—(1 Chron. xxi, 25.)

so absolutely invulnerable that we can understand the boastful insolence of the blind and of the lame. The Tyropœan, in its then condition—99 feet deeper than it now is—a mere gully between the two mountains—was no insignificant obstacle to any attack from this side.

Well did Joab deserve his promotion when he reached the ditch, and scaled the rock, surprising the garrison, much as the garrison of Edinburgh Castle was surprised in days of yore, when the seemingly inaccessible rock was scaled by a daring soldier.

In searching, while we lived in Jerusalem, for the Tsinnor, we remembered how invariably the eastern mount, Moriah, had been taken before the upper city, Zion. It lies lower, and was more accessible to attack. It must have been still more so in David's time, before it was walled and fortified by the Temple buildings.

But we never could satisfy ourselves that the Tyropœan valley, as it now is, fully answered the idea of a Tsinnor, though it fairly suited that of a fortified ditch between two walls of Zedekiah's time. But the discoveries of Sir Charles Warren have revealed not only the amazing depth and straitness of the Tyropœan gorge, and its true course, bending eastwards, but have also at this very point traced out the great rock canal at the base of Zion, and have demonstrated that this canal, a veritable Tsinnor or gutter, existed before Solomon built the Temple, in the days of David and of the Jebusites.

It is shown in "The Recovery of Jerusalem," in a picture on page 105. And the mouth of it is shown just west of Herod's Temple wall, in the elevation of south front of the noble Sanctuary, which also shows the slope of Zion as it falls into the deep Tyropœan bed on the right (page 119).

If the elevation were continued westwards we could better understand the full height of Mount Zion, the Upper City, 110 feet higher than the summit of Moriah (which is 2,440 above the sea level).

Moriah was the possession of Ornan—a royal possession indeed; and from 2 Sam. xxiv, 23, he would seem to have been the Jebusite king. The Hebrew text here says, "All these did Araunah, a king, give unto the king."

This may help us to understand the references to the king's dale, and to the king's gardens, in the Kedron Valley, between Moriah and Siloam—now and for many ages the property of the Siloam people. In looking for any living relics of the Jebusite people who were still existing in the days of Ezra and Nehemiah, and of whom some probably still exist as native Fellahhîn, the most likely villages would doubtless be Siloam—Et Tûr (on Olivet), Abu Dis, and perhaps 'Aisawîyeh, north of Olivet, and Beit Sahhur, south of Siloam (Josephus, Wars, v, ix, 4, speaks of the Siloam gardens and of the people as being then enemies of the Jews).

It is from some of these villages and others that Sir Charles Warren obtained the sturdy labourers who worked so well under him and his Royal Engineers in tracing the mighty works of Solomon and of the Jebusites before him.

E. A. Finn.

IRRIGATION AND WATER SUPPLY IN PALESTINE.

Mr. William Simpson, in his interesting paper (p. 55 January *Quarterly Statement*), mentions the system of pits for water connected with shafts at intervals, and linked by an underground tunnel, as seen by the Rev. Mr. Harper and the Rev. J. Niel in the Vale of Siddim, also found at Surtabeh and Damascus.

Mr. Simpson found the same system in use in Persia and Afghanistan, where the pit and tunnel are called Karaize. Sir R. Burton also mentions them. The same system is still in use in Cyprus, where professional well and aqueduct makers construct them as in olden times, in what look like waterless districts. The word used in 2 Kings iii, 16, is גֵּבִים 'reservoir,' and also in Isaiah xxx, 14, Jeremiah xiv, 3, and again of the Siddim Vale in Ezek. xlvii, 11, where our version gives "marishes." The same word is still in use in Palestine, *e.g.*, the well known Jebb (جبّ) Yussuf between Siberias and Safet.

E. A. Finn.

THE STONE (EBEN) OF ZOHELETH.

As no one has yet produced an instance (1889, 44) from the Bible of *eben* meaning a *cliff*, it may safely be concluded that such is not to be found. Major Conder's note (*id.* 99) fails to meet the case, for he quotes Gesenius as rendering *eben rock* (Gen. xlix, 24), but the dictionary says that "some persons apply the term (*rock*) to a stone of any size, and speak of boys throwing *rocks* at each other—a supremely ridiculous expression."

In the verse above, the A.V. and R.V. render the word "the stone of Israel." The Arabic *Zehwele* (for all that I know) may come from the Hebrew *Zoheleth*; but it is an utter impossibility for a solid *cliff*, however slippery, at the village of Siloam, ever to have been the moveable stone of Zoheleth, close to Enrogel, several hundred yards distant from that village.

Several explanations have been given of the word *Zoheleth*. If the expression means the stone of "moving to and fro," let me offer the conjecture that it was a *logan* (or rocking) stone which will *log* again, whenever the *débris* of centuries is thoroughly cleared away from near Enrogel.

W. F. Birch.

GIHON.

On p. 124, Dr. Chaplin thinks it not improbable that the name Gihon (Fountain of the Virgin) was derived from "*gahan*, to bow down, to prostrate oneself, and was originally applied not to the fountain, but to

the canal which brought the water from the fountain," *i.e.*, it was applied to the Siloam tunnel.

Thus, as it would be most unsatisfactory to have to take 1 Kings i, 33, 45, as speaking proleptically, when Gihon is named by David and Jonathan, it must in this case follow that the Siloam tunnel existed in the time of David.

Surely Dr. Chaplin does not wish to maintain—

1. That the Siloam inscription in the tunnel is as old as the time of David.

2. Or else that it was cut (perhaps hundreds of) years after the tunnel was made.

3. That the tunnel, therefore, is not the work of Hezekiah referred to in 2 Chron. xxxii, 30; but was made in or before the time of David.

So critical was Hezekiah's position that there was reason in his making the tunnel. It is not easy, however, to see why either David (who fled before Absalom) or the Jebusites should ever have executed in haste such a gigantic work. Accordingly, the proposed derivation seems inadmissible.

Dr. Chaplin's paper satisfies me at last that the Pool of Siloah (the ditch, Is. xxii, 11) was actually enclosed by a wall, *i.e.*, the outer wall of 2 Chron. xxxii, 5; and that "the two walls" (Is. *id.*, 2 Kings xxv, 4) were not a loop-wall defending the pool, but the old city wall, and the outer wall, which thus placed Siloam within the city.

W. F. Birch.

DEFENCE OF THE GUTTER (TZINNOR).

In *Quarterly Statement*, 1885, 62, I expressed my willingness to challenge attack on this question. Let me then try to defend my theory against the objections urged from time to time.

As the *Fund* being mutilated would end in *Fun*, so the quotation (*supra*, 39) from Ewald probably fares likewise, through Major Conder's not reaching to "the lame and the blind."

Though my interest in *Jerusalem* topography is owing to the accident of some of Warren's plans having in 1868 been sent to me through a postal error, still Mr. St. Clair wrongly attributes my theory to a guess. It is due to sheer plodding, superadded to a slight acquaintance with Hebrew characters, and to a resolute adherence to Scriptural Hebrew usage, which neither allows *emek*, *ge*, and *nachal* (1878, 180) to be interchangeable terms, nor "two hundred and a thousand" (as in the commonly accepted version of the Siloam inscription) to mean "one thousand two hundred."

The perception (1878, 182; 1882, 56) that the Tyropœon was the Valley of Hinnom forced me to place Zion (the City of David) on Ophel. The only reason discoverable for choosing such a low site was the proximity of Gihon, while Kennicott's explanation of 2 Sam. v, 8,

revealed the full reason. As some one in the city must have helped Joab to ascend a practically inaccessible shaft, I was driven to search for a traitor.

At this point I find Josephus dragging in Araunah, as not slain with the rest because of his good-will to Israel and special affection for David, while the extraordinary generosity shown to Araunah in his being permitted to possess the hill just above the City of David, indicates that the Jewish king was deeply indebted to him. If Mr. St. Clair, however, cares to argue that it was Araunah's *grandmother* who was the traitor I shall be glad to answer him. My theory is no guess, no product of a vivid imagination—the constant bane of topographical research.

Josephus, in rendering *tzinnor* by ὑποκειμένων φαράγγων, is no opponent of mine, since Kennicott says this means "subterraneous cavities." The *plural* here is of importance; for surely it would not be necessary for the assailant to cross more than one valley or ditch in order to take Zion. Most interpreters agree (1878, 184) in making the word signify something *hollow* and in applying it to water. Those who render the word *watercourse* (R.V., Sp. Comm.) are practically in agreement with me, since the first length of 70 feet from Gihon (Virgin's Fount) into Zion is actually an *aqueduct*. A watercourse, according as it is (practically) horizontal, oblique, or perpendicular, forms an *aqueduct*, as at Gihon; or a *cataract* (as claimed by some for Psalm xlii, 7); or a *waterfall*, as interpreted by Ewald, and urged by Professor Sayce; only unfortunately on Ophel (at Gihon) the water is at the bottom when we first find it, and so both the proposed cataract and waterfall would have to do without water at the top—a most awkward arrangement.

Mr. St. Clair says my theory (or explanation) is "only a guess unsupported by any coincidence with any description in the Bible or elsewhere." Let me show how it is supported by coincidences with both the Bible and "The Recovery of Jerusalem," and also with Palestine topography and history in general.

The account in 2 Sam. v, 8 is certainly concise and obscure, if not elliptical; but 1 Chron. xi, 6, supplies what is wanting (1885, 64). Two words, however, in the Hebrew give us all we need; they are בצונר ויגע. Professor Theodores renders them "reaching as far as the aqueduct." The extreme difficulty of discerning what was meant has produced a variety of interpretations. Bochart, Ewald, &c., from the verb נגע appear to have got the idea of hurling persons down the waterfall (or that down which the water fell, *i.e.*, the cliff).

To me, in the verse quoted, יגע seems connected with the verb יגע (indeed the LETTERS are identically the same), which means *to labour, to exert oneself, particularly to make strenuous exertions.* I conclude, therefore, that he who was going to smite the Jebusites had before him a task demanding almost superhuman exertions; he would have to make strenuous exertions (literally) *in* the gutter.

Even getting along the watercourse in this luxurious age (when, as Mr. St. Clair tells us, the water flows at a lower level than formerly)

proved a dangerous matter, when Captain Warren was attempting to get up the vertical shaft. He states ("Recovery of Jerusalem," 245), "Once, while the fellahîn were bringing in some frames, the spring suddenly rose, and they were awkwardly placed for a few minutes, being nearly suffocated." How would they have fared if the water, instead of flowing through the tunnel, could only have overflowed into the Kidron! Surely Joab essayed an enterprise hazardous enough in the first 70 feet, and there were worse perils beyond, viz., the Thebez stone, and the Jebusite sword, and possibly the deep pit.

I have ventured to take יגע (2 Sam. v, 8) as referring to *exertion* in the gutter; but as there is apparently something wrong with the passage, I must decline to deal with it grammatically. Certainly Hebrew is a charmingly elastic and reversible language if this one word equally well describes Joab's slowly going *up* (R.V. "Let him get *up* to the watercourse") and the Jebusites' quickly coming *down* (Ewald, "Let him *hurl down* the waterfall the lame, etc.). Therefore waiving this diplomatic word, let me show how the other word *tzinnor* of itself establishes my theory.

I have to prove—

(1.) That the fortress Joab took was immediately west of Gihon.

(2.) That the *tzinnor* meant the passage from Gihon leading to Ophel.

(3.) That it was practically inaccessible.

(4.) That, therefore, there must have been a traitor.

(5.) That Araunah was that traitor, being spared and enriched.

Now as to these several points,

(1.) Has been proved in these pages (1878, 180; 1885, 104; 1888, 46), and he that will dare to attack my arguments must be more venturesome than even Joab.

(2.) Was settled years ago by Kennicott, before the secret passage on Ophel was ever thought of. As Gihon was the only spring hereabouts, so this, consequently, was the only passage that could possibly be alluded to. Let me add, however, that the *tzinnor* at Jerusalem is no solitary instance of this kind of contrivance. The one at Rabboth Ammon mentioned by Polybius, and perhaps as old as Joab's time (1878, 190; Jos. Ant. vii, vii, 8) gave Kennicott the clue to the truth. Another at Gibeon is described and pictured on page 23. I believe there was another at Samaria, and I am satisfied there was another at Bethel. The proximity of the spring and the words in Judges, i, 24, 25, "the entrance into the city" (*see* also Jos. Ant. v, 2, 6) forbid my doubting it. At the castle of Subeibeh there is also a passage, said (but vainly, I believe) to reach to the spring at Banias. After such instances as these it is rather for my opponents to prove that *tzinnor* does not mean the secret passage at Gihon, and to show why the Castle of Zion was ever built on Ophel, except for the purpose of obtaining water by such a contrivance.

(3.) Is proved by the difficulty named above, and by Sir C. Warren's account of his ascent in 1867 (Recovery of Jerusalem, 245).

(4.) Naturally follows from (3). But here again I may add, that as Bethel fared, so afterwards did Zion. From Bethel to Khartoum treachery has always been a common and often the easiest way of taking a fortress. Let the founder of the Hittite Luz witness this, or the *Callidus emptor Olynthi* and his gold-ladened ass, or Demosthenes (De Coronâ, page 324) with his long list of traitors, or the Jotapata deserter (Wars, iii, 7, 33) who might have told us something interesting about Josephus himself. In short, history and the east (if not the west) have always swarmed with traitors.

(5.) David was exasperated,[1] and Joab never scrupled to shed blood. To think that the Jebusites would receive any quarter is absurd. If the Bethelites in the north of Benjamin were put to the sword, why should mercy be shown to an *insolent* enemy in the south? Certainly the Bible does not say that Araunah was spared at the capture of Jerusalem; but all statements in profane historians are *not necessarily untrue;* and Josephus twice distinctly asserts that Araunah, for special reasons, was spared, when the city was taken; and from the Bible we further gather that he was rich, receiving from David 600 shekels of gold. Josephus, I admit, does not positively say that Araunah was guilty of treachery; but it seems to me that either from tradition or his own common-sense he knew this was the case, and that he *meant* his readers to see it too. Traitors, it must be remembered, do not like to be *called* traitors, and after a certain shady transaction and suspicious-looking prediction connected with Jotapata some years before, Josephus probably concluded on reflection that it was coming too near home for *him* openly to brand Araunah as the betrayer of Zion (Ant. vii, 3, 3; 13, 4).

I claim, therefore, on the testimony of one Hebrew word, and of Sir Charles Warren, &c., that my "Gutter" theory, so far from being *only a guess*, is amply corroborated by "coincidence with the description in the Bible and elsewhere."

Further, Joab's exploit seems to be alluded to in Prov. xxi, 22: "A wise (lit. *crafty*) man scaleth the city of the mighty (*gibborim* in Hebrew) and casteth down the strength of the confidence thereof." Joab was *crafty* enough, the Jebusites *confident* enough (2 Sam. v, 6), while Zion, when it became the City of David, was garrisoned by men *mighty* enough (his *gibborim*); though four centuries of successful resistance might well have entitled the Jebusites to the same distinction.

It is open to question how much of the underground passage (from Gihon to the surface of Ophel) traversed by Captain Warren was covered by the term "Gutter;" certainly the first 70 feet; probably the shaft 40 or 50 feet high; possibly from this point Joab may have advanced by the south-west limb of the cave now partly filled (1867,

[1] "*Hated of David's Soul*," 2 Sam. v, 8. Both here and in 1 Chron. xi, 6, *smiteth* occurs. Nabal barely escaped with his life; the Amalekites were *all* slain (1 Sam. xxvii, 9); the Ammonites were tortured to death (2 Sam. xii, 31). Surely at Jebus *all* would be slain, except *the traitor* and, it may be, his family.

Letters, 39) with dry walls and (I conjecture) connected with "the passage) apparently "blocked up" in the chamber at the bottom of the chasm.

Posthumous fame is so greedily sought after, that (I think) it is quite possible that somewhere in the "Gutter" Joab had an inscription cut commemorative of his daring feat. Some day it may be found and read.

W. F. Birch.

THE POOL THAT WAS MADE.

We learn from Nehemiah iii, 15, 16, that the wall of Jerusalem, in its course from near the Pool of Siloah to the pool that was made, passed over against the sepulchres of David.

It is certain (*Quarterly Statement*, 1879, 177; 1889, 209) that the course described above was on Ophel (so-called), and enclosed the sepulchres of David, leaving them on the left hand (1879, 179), and that the Pool of Siloah was in the Tyropœon Valley, at the southern end of Ophel. Mr. Schick's discovery of the old Shiloah aqueduct has entirely removed (*Quarterly Statement*, 1889, p. 37) the great difficulty noticed by Thrupp in regard to Siloam.

If, now, the position of the pool that was made could only be satisfactorily defined, we should be a step nearer, and possibly very near indeed, to finding the sepulchres of David.

Recently, in a totally unexpected manner, fresh light has fallen upon the position of this pool. In *Quarterly Statement*, 1889, p. 51, I proved, at least to my own satisfaction, that the Jebusites, for the sake of obtaining water, hewed the mysterious rock-staircases north of Joab's Well. But if there was any need for this work, and otherwise it would not have been made, they surely would never have allowed the waters from Gihon (Virgin's Fountain) to run to waste, but rather have carefully stored them in some pool. Such a pool must necessarily have been in the Kidron Valley, south of Gihon, unless we suppose that Schick's aqueduct (*Quarterly Statement*, 1889, p. 51) was made by them, and not by Solomon. This seems to me most improbable.

Thus at last we gain a glimpse of a very *old* pool existing at Jerusalem in the Kidron, south of Gihon, even as far back as the time of Joshua. Curiosity eagerly asks, "Is it noticed in the Bible? What was its name? What was its approximate position?"

For twelve years I have been probing this question of the site of the pool that was made, and from time to time have supported or suggested five different positions (*Quarterly Statement*, 1877, pp. 202, 204; 1879, 180; 1883, 107, 155) for it between Siloam and the Virgin's Fountain; indeed, wherever within these limits I could find a pool existing or devise a supply of water to fill one. This troublesome search became necessary (as I stated in *Quarterly Statement*, 1877, 202) "in default of any evidence of a pool situated further south (*i.e.*, than the Virgin's Fountain) in the valley of the Kedron," to represent *the pool that was made*.

Thus the conclusion forced upon me, that the Jebusites themselves made a pool south of Gihon, is most welcome, inasmuch as, by providing a pool in the Kidron, it exactly meets the obvious requirements of Neh. iii, 16 ; and so another difficulty of long standing entirely vanishes.

So confident am I that this theory is not a mare's-nest that below I request the Executive Committee to undertake an excavation in the Kidron ravine, in order to test and (I doubt not) also to prove the correctness of my conclusion.

It seems to me, however, that one may safely go still further. Stanley ("Palestine," 513) gives the Hebrew word for *pool* as meaning an *artificial tank*. I believe this opinion is correct.

As then every pool had, of course, to be made, it is most extraordinary that one should be described merely as "the pool that was made," without any addition whatever as to *when*, or *where*, or *by whom*, &c., it was made ; some such explanation seems absolutely necessary. Now, Isaiah (xxii, 9, 11) says to the people of Jerusalem, "Ye gathered together [or *drew in*, *withdrew*, *i.e.*, into the city] the waters of the lower pool. . . . Ye made also a reservoir [R.V.] between the two walls for the water of the old pool." This lower pool seems to me to be the King's Pool named in Neh. ii, 14, and to be identical in position with the present lower Pool of Siloam ; while the reservoir seems to be the pool which (2 Kings xx, 20) Hezekiah made in the Tyropœon, close to Ain Silwân, at the southern end of his rock-tunnel through Ophel. The result of this tunnel or aqueduct being made would be (1) that the waters of Gihon, being thus diverted, would no longer, by means of Schick's aqueduct, supply the lower or King's Pool ; and (2) that Hezekiah's pool or reservoir (A.V., "ditch") would receive the waters of (the Jebusite pool, *i.e.*) the pool that was made ; by this I mean the waters which, but for the diversion, would have flowed into that pool. Be it observed, however, that Isaiah speaks of the reservoir receiving the waters of (*i.e.*, which used to flow into) the *old* pool. The Jebusite pool would, indeed, be pre-eminently *the old* pool. Hence I conclude without hesitation that "the pool that was made" (Neh. iii) was identical with the old pool (Isaiah xxii).

Further, as the words "that was made," without any addition, appear to me (as stated above) to form an unmeaning description, I strongly suspect that through some defect in the manuscript the Hebrew word for *old* (ישנה) has been misread into "that was made" (עשויה).

I may add that the three pools (the King's Pool, the Pool of Siloah, and the pool that was made) in Neh. ii, iii, seem to me to be necessarily *three different* pools, being mentioned by one writer in one story, but I do not see any impropriety in Isaiah's subsequently describing one of them (the King's Pool) as the lower pool.

It remains to consider the approximate position of the Jebusite, *i.e.*, "old," pool, mis-entitled "that was made." (1878, 187, 5.)

Mr. Schick's excavations, narrated in *Quarterly Statement*, 1886, p. 198, seem to supply a clue to the right answer. In his first shaft, A, in the

Kidron Valley, 350 feet south of the Virgin's Fountain, he says, "We struck a bottom of very hard concrete a few inches thick, consisting of lime and small stone chippings, with pounded bricks in it. Under it there was dry mud, like the deposit in a well or a pool. . . . Has the valley really been so deep here, or have I come into an old pool? I cannot tell." Let excavation decide the question. I would, however, observe that the Jebusite pool would need a concrete flooring, and this is exactly what has been found, while the non-discovery of broken pottery below the concrete seems to suggest that the latter was put down in very early times. By excavation it might easily be ascertained whether this concrete is a part merely of a small cistern or of an actual pool.

If the concrete should be found to extend westwards to the Ophel hill and to end at a point where the rock is perpendicular or scarped, so as to present a steep face, and if remains of an old wall should be found at the top of this steep rock, or even if the rock at the top be found to be such that it is suited for the foundation of a wall, then I am ready stoutly to maintain that the concrete really marks the site of the pool that was made.

Neh. iii, 16, distinctly says that the wall was repaired *to* this pool, and the Hebrew word (עַד) used for *to* or *unto* (R.V.) in this chapter seems to me to mean in this description *right up to* or *close to* (*see* iii, 20, 21, 24). But the wall, so far as I can see, could only come *close to* the pool, not by the wall descending into the valley, which seems out of the question, but by the pool itself reaching to the foot of the rock on which the wall stood; and this would apparently be effected by the rock being cut down so as to present a vertical face, and cut to such a depth that the water would reach the foot of the scarp.

Should excavation happily show the existence of a pool at the shaft A, then the limits within which the sepulchres of David are to be found, become greatly reduced. For then this pool, instead of the Virgin's Fountain, would be the most northernly limit possible. Further, if those sepulchres had been close to the pool, it would hardly have been worth mentioning them as a landmark. I think, then, we might safely strike off quite 200 feet from the end at Siloam, and measure off nearly as many from the southern end of the Jebusite pool. This would leave us a distance about 100 yards long, north and south, within which it is exceedingly probable, if not absolutely certain, that the sepulchres of David are situated. The breath of the area need not now be calculated. This discovery (that is to be, so to say) of the pool that was made, of course, requires the city of David to be extended further south than I have placed it on my plan (1886, 34; 1889, opp. 36), and the position of David's tomb probably must go with it. I cannot help this; but I stated (1886, 34) that "How far the city of David extended *southwards* is *open to question*," and that "the approximate position of the sepulchres of David is a still more difficult question." I earnestly hope that here once more the Executive Committee will decide that the spade shall certainly follow the pen.

W. F. Birch.

Note on the Pool that was Made.

Further consideration satisfies me that the "concrete flooring" was part of an actual pool, and not merely of a well. If excavation should show that I am wrong in this conclusion, the precise position of the pool that was made will still be unknown; yet it is a point gained to find that it was situated in the Kidron.

On the supposition, however, that the concrete marks a pool that was made by a dam across the valley, a considerable difficulty at once probably presents itself, inasmuch as Mr. Schick failed at shaft A to find rock at 2,064 feet, although it is given on the contour plan as lying at 2,099 feet. This difference of at least 35 feet implies that our knowledge of the rock-surface at this part of Ophel is still very imperfect, and it follows that any proposed line of wall based on such imperfect knowledge, *may* easily be very far from the truth.

It may also approximate to the truth. An examination of the rock contours in the Jerusalem Portfolio leads me to the following admissions :—

1. If the Jebusite pool really reached westwards, so as to be almost beneath the wall, then the wall must practically have approached the valley to near contour 2,129. If, however, it should be found that the water of the pool could not have reached within 50 or even 80 feet of the foot of the wall, then the meaning attached above to עַד must be given up. Nevertheless this would really prove a great help, since the loss of verbal precision in this case would be a great topographical gain, inasmuch as in Neh. iii, *unto over against* obviously implies a greater intermediate distance than *to* or *unto*.

If, therefore, the Hebrew word for *to* should be found to apply to a distance of 50 or 80 feet, then as the wall was *over against* the sepulchres of David, it follows that they were more than that distance from the wall; and so whenever the wall is found (a comparatively easy matter) there will be no need to search the first 50 or 80 feet from the wall. It will suffice to examine the rock beyond this distance.

2. As the placing of "the pool that was made" near shaft A, apparently requires the City of David to have extended further south than is shown on my plan (*Quarterly Statement*, 1886, 34), and as the contour plan in the Portfolio gives a steep or scarped corner of rock on Ophel, 250 feet north of the Pool of Siloam, it seems to me very probable that the wall of the City of David followed the line of this scarp. Accordingly, I extend the west wall southwards 250 feet, and thence across the ridge of Ophel, until on the eastern side it reaches to contour 2,179 feet. At this point, the outer wall built by Hezekiah to defend his new reservoir, *i.e.*, the Pool of Siloam, came, I imagine, close to or joined the old wall of the City of David, though whether the point of junction was here or more to the west is open to question.

As this point of junction, an important one as a landmark, is not mentioned by Nehemiah, I can only account for its omission by supposing that the Sepulchres of David were opposite this point, or at any rate sufficiently near to render unnecessary the mention of any other landmark.

From Neh. iii, 16, it seems clear (1886, 34) that the Sepulchres of David were within Nehemiah's Wall, and I am more and more inclined to think that they were also *within* and not merely *near* the City of David. On measuring up my plan I cannot make the part of my wall to be *over against* these sepulchres, until a point is reached at least 350 feet distant from Siloam. When a further distance of 150 feet has been struck off from the wall running south from near the Jebusite Pool, there only remains a length of wall amounting to 230 feet, *over against* which the sepulchres could have been situated, while the breadth of the area available for the sepulchres of David, cannot, it would seem, exceed 130 feet. Further, this breadth, for searching purposes, may, as aforesaid, be reduced to 80 or 50 feet, in case the wall is not found to pass close to the Jebusite pool.

I do not at present see any prospect of fixing the position of the Sepulchres of David more precisely than I have attempted above, and therefore, after twelve years' hunt, I must leave to some enterprising explorer the task of bringing matters to a successful termination by actually discovering the long-lost tomb of David.

Any reader observing any defect in my theory will oblige me by pointing it out.

P.S.—The only reason I can suggest why the 148-foot tunnel (*Quarterly Statement* 1889, 48) was made almost on a level with aqueduct leading southwards from the grotto, is that the waters from that grotto, *i.e.*, from En-rogel, might thus be conducted to some point within the wall of Jerusalem. If this work had onl been finished, then (1) by walling up in part the southern entrance to the grotto the waters of En-rogel could have been drawn from within the city by means of a shaft or staircase leading to the northern end of the tunnel; and (2) the tunnel would have afforded a secret way of exit from the city and so afterwards have helped Zedekiah in his flight from the Chaldæans.

W. F. B.

THE SILOAM INSCRIPTION.

The commonly accepted version of the fifth line in the Siloam Inscription is not entirely satisfactory, insomuch as it is inconsistent with Scriptural Hebrew usage.

It stands thus in the Jerusalem Memoirs, 347, and *Quarterly Statement*, 1883, 210: "And there flowed (5) the waters from their outlet (or the spring) to the pool for a thousand two hundred cubits." Professor Sayce gives it again, as follows, in his "Fresh Light from the Ancient Monu-

ments" (87), "The waters flowed from the spring to the Pool for a distance of 1,200 cubits."

Professor Sayce (88) says, "The language of the inscription is *the purest Biblical Hebrew.* If this be the case, the translations given above need correction, since the words, as deciphered in the inscription, stand literally as *two hundred (and) a thousand.* Dr. Neubauer, in the "Athenæum" (1881, 112), remarked that such an expression "is not Hebrew. The thousands are always before the hundreds." We have, indeed, in 1 Sam. vi, 19 (R.V.), the words, "He smote of the people *seventy men* (and) *fifty thousand men,*" but some explanation is obviously required, since there could not be 50,000 men at (or even near) Beth-shemesh. Consequently this passage virtually supports the above-named rule.

The letters in the inscription rendered *two hundred* are במאתים. On this Major Conder observes (1882, 124), "There is no doubt room for the disputed letters . . . . . but I have not been able to find any trace of the ם on either squeeze, cast, or stone." He adds (Jerusalem Mem. 352), "The *Tau* in במאתי seems to us to be very doubtful, though strokes exist which may have belonged to such a letter."

Professor Sayce was content at first with *a thousand cubits* and interpreted the letters במאתי to mean *for a distance of,* but he practically abandons this translation and accepts the other, by "formally retracting (1883, 210) his objection to the reading (translated) *two hundred.*" Accordingly there is no need to deal with his earlier translation.

The question now is, what is the original word that has been metamorphosed into this inadmissible *two hundred?*

We seem to have some six letters of which the first from the left appears to be utterly illegible (really a space and nothing more remaining), and the third from the left is very doubtful, though some strokes exist.

Seven years ago when the true solution of the Shiloah difficulty first presented itself, I wrote in *Quarterly Statement,* 1883, 106, as follows:— "Without question, then, the canal seems to me to be the work of Hezekiah, and to be referred to in two passages in the Bible, 2 Kings xx, 20, and 2 Chron. xxxii, 30. I anticipate that the wording of the inscription will finally be allowed to confirm the identity of this canal with these works of Hezekiah.

On page 148 (1881) apparently,
המוציא (5) represents פרצא in 2 Chron. xxxii, 30.
מאתי (5) represents למטה in 2 Chron. xxxii., 30."

Mr. Schick's discovery (1889, 35) proves that this passage in the Chronicles refers to the Siloam tunnel. Thus the Bible account (R.V.), "Hezekiah stopped the upper *spring* of the waters of Gihon and brought them *straight down* on (rather with A.V. *to*) the west side of the city of David," really answers to the record in the inscription, "The waters flowed from the *spring* to the pool (....י...במא) a thousand cubits."

Now as the *spring* named in the inscription coincides with the *spring*

named in Chronicles, so I believed and now maintain (no other suggestion, so far as I know, having been made) that the required Hebrew word, of which some letters survive, corresponds to *straight down* in the Biblical account. We are told *whence*, and *whither*, and *the distance* the waters flowed. The mutilated word (obviously not referring to the pool) most naturally would and (it seems to me) *must* describe *how* they flowed.

In 2 Chron. xxxii, 30, this *how* is described as *lemattah* and is translated in the Authorised and Revised Versions as *straight down ;* but I am glad to find that at least fifty years ago the word was explained to mean *by a subterraneous course ;* while *subterranean passage* is the very term applied to the tunnel by Professor Sayce in *Quarterly Statement* 1881, 141.

I need not attempt to show how *lemattah* in Chronicles can have assumed the particular combination of letters professedly found in the inscription. It must, however, be assumed that in the inscription, the first three Hebrew letters, viz., במא are *correctly* deciphered by the experts. All that remains for me is to complete in the *purest Biblical Hebrew*, the word thus beginning (and to complete it) in such a way that it may suitably describe the course of the waters through the tunnel.

The only word I can recommend is במאורה (as written in Isaiah xi, 8), meaning *in the hole or cavern.* Genesius says, "Root עור Arab..... to be deep, to be *excavated.*" Accordingly I translate the fifth line thus, "The waters flowed from the spring to the pool *in the cavern* (hole or subterraneous passage) a thousand cubits."

Let me frankly admit that *mearah* is not quite the word I should have expected to meet with in this inscription. A monotonous repetition of נקבה (excavation) would have been more in keeping with the stonecutter's style or the composer's meagre vocabulary.

One, however, who has not seen squeeze, cast, or stone, cannot (where there is obviously no collusion) challenge the unanimous decision of independent inspectors unbiassed, at least, in regard to the first three letters of the mysterious word.

W. F. Birch.

SUTEKH, CHIEF GOD OF THE HITTITES.

The more we learn of the gods of the Hittites, the more we shall know of the Hittites themselves, for the ideal aim of nations and tribes is to become like their own gods. Sutekh was clearly the principal deity of the Hittites, for his name occurs the oftenest, and on the Karnac copy of the Egypto-Hittite treaty he is invoked as the deity of many places.

What was his form and representation? And what was his precise place in the astro-religious system of the ancients? On the engraved silver plate which contained the Hittite text of the treaty, the god was figured in the centre. The silver plate has not come down to us. Yet who knows but that the figure of Sutekh may one day be found surviving among the hieroglyphs of some Hittite inscription! The name is probably

Egyptian, compounded of Sut or Set (= Sothis, the Dog-star) and ekh, meaning ruler. We may look upon it as an Egyptian equivalent for the Hittite name of the deity, or as the name of an Egyptian god corresponding to the Hittite deity, and the actual name used by the Hittites is yet to be sought for. Sutekh is generally accepted as being another form of the name Set. Set was a god whose worship was established among the Hyksos or Shepherd Kings, and who had once been in favour with the Egyptians, but had come to be regarded by them as a personification of the Evil Principle. He thus became connected and confounded or identified with Typhon, as the murderer of Osiris. The place of this evil deity was in the Underworld, the dark abyss below the horizon. This is the astronomical position of the stars ushered in by Sothis, in the slow motion of *precession*. These stars make up the constellation of the whale (*Cetus*, Κητος) which, according to the Greeks, is the sea-monster from which Perseus delivered Andromeda. According to Liddell and Scott, the Greek Κητος, besides meaning sea-monster and the constellation of the whale, seems to have the root meaning of gulf or depth or abyss ; and this is surely because the whale constellation is in the same dark region as the abyss, as the abyss is located in the mythological system.

Sutekh, then, may be the god of the constellation Ketos, including as its herald the bright star Sirius. So his worshippers might be called Keteioi or Ceteans, just as the worshippers of Athene were called Athenians, and the worshippers of Assur, Assyrians. The Moabites are called in Scripture the children of Chemosh, after their god, and the Hittites are called the children of Heth (Hebrew *Cheth*, Assyrian *Kheta*)—why not also after their god ? Homer makes mention of some Ceteans (Odys. xi, 521), and the Scholiast says they were "a people of Mysia of whom Telephus was king." Mr. Gladstone has suggested their identity with the Hittites ; and Prof. Sayce thinks Mr. Gladstone may be right. ("The Hittites : the story of a Forgotten Empire," by A. H. Sayce, p. 120.)

The suggested etymological connexion of Kheta with Ketos does not require us to believe that the Hittites borrowed a god from the Greek pantheon, or a name from the Greek language ; for the borrowing may have been the other way. The worship of a sea-monster by the Hittites (if that was so) was but as the worship of Dagon by the Philistines, or the reverence of the Babylonians for Oannes the Fish-man, who brought them civilisation. That the Hittites should reverence, as a god of heaven and earth, a deity discarded by the Egyptians as a ruler of darkness, was only what was charged also upon the Hyksos, and upon the Israelites themselves by their enemies.

The consort of Sutekh is believed to have been Atargatis or Derketo, a goddess half-woman, half-fish (Wright's "Empire of the Hittites," Sayce's "Hittites") ; and this lends further support to the idea that Sutekh himself was a Fish-man, the god of the deep.

George St. Clair.

NEHEMIAH'S WALL AND THE SEPULCHRES OF THE KINGS.

In the *Quarterly Statement*, April, 1889, I wrote a paper on Nehemiah's Wall, in the course of which I showed the probable position of the royal sepulchres. Mr. Birch criticised my paper, and I replied. The argument might very well have ended there. But Mr. Birch returns to the attack, and it is obvious that the discussion might be prolonged indefinitely. Mr. Birch apologises for his "tedious notes" on the ground that unless he can show my errors the Committee will not excavate (on *his* site) and find the sepulchres of the kings. It does not occur to him as possible that they might excavate on my site and find them. However, I agree with him that the appeal should now be to the spade. If the Committee will resolve to excavate on both sites they will please a good many subscribers; and I, for my part, shall not mind which site is tried first.

George St. Clair.